DOCUMENT RESUME

ED 083 368 CE 000 249

TITLE	Manpower Alliance Conference Proceedings (Geneseo, N. Y., March 26, April 29, 1971).
INSTITUTION	Genesee Region Educational Alliance for Health Personnel, Inc.., N.Y.
PUB DATE	Apr 71
NOTE	77p.
AVAILABLE FROM	Genesee Region Educational Alliance for Health Personnel, Inc., 311 Alexander Street, Rochester, New York 14604 ($1.50)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Certification; Community Colleges; Conference Reports; *Health Occupations; *Health Occupations Education; *Health Personnel; Manpower Needs; *Medical Services; Paramedical Occupations

ABSTRACT

Papers from the first of this two-part conference were by Leonard W. Cronkhite on new models and concepts of the health care system, by Joseph Kadish on the evolution of new health occupations, by Evan Charney on health team relationships, and by Mary Hill on expanded use of existing health personnel. The second session consisted of papers by Israel Light on new systems for educating and training health personnel, by Elliott F. Leuallen on state requirements for registration, certification and licensure of the health professions, by J. Lowell Orkison on the Carnegie Report on trends in medical education, and by Marilyn Schima on allied health education at the community college level. Six discussion groups presented recommendations at each of the sessions. Faculty and planning committee members and conference registrants are listed. (MS)

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Manpower Alliance

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Conference Proceedings

CE 000249

March 26 and April 29

Geneseo, New York

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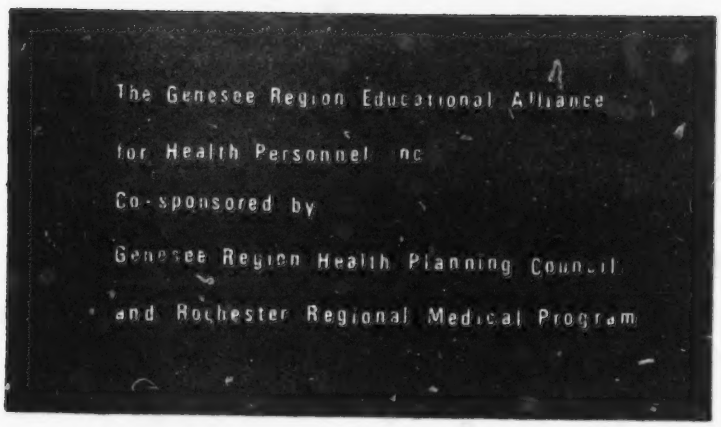
The Genesee Region Educational Alliance
for Health Personnel, Inc.
Co-sponsored by
Genesee Region Health Planning Council
and Rochester Regional Medical Program

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INTRODUCTION

GENESEE REGION EDUCATIONAL ALLIANCE FOR HEALTH PERSONNEL, INC.

The Alliance is a voluntary, autonomous organization designed to address the health manpower needs in the ten county Genesee Region. It was developed by the Genesee Region Health Planning Council and the University of Rochester School of Medicine and Dentistry as a health training consortium to deal with common regional problems which frequently involve acute health manpower shortages in specific health careers, inappropriate use of clinical and faculty resources, lack of coordinated curricular structures which would allow upward and geographical mobility, and inconsistencies between academic goals and health service employment requirements.

The first major project of the Alliance is to be a detailed inventory of all educational programs, prerequisites, elective courses, including field experience placements offered by all organizations affiliated with the Alliance. A subsequent project will be concerned with coordinating curricula, followed by projects on sharing faculties and facilities. The design emphasis will be on the timely collection, analysis and dissemination of accurate data regarding health manpower requirements and programs. This information base will enable the rational decision-making necessary for more efficient and effective manpower utilization. The professional staff of the Alliance will be hired by and will report to the Board of Directors for program direction.

The permanent Board of Directors was elected on January 28, 1971 and consists of five representatives each from colleges and universities, hospitals, community or regional health service organizations, lay members chosen from the community at large, and the Chairman of the Manpower Committee of the Genesee Region Health Planning Council. As of June, 1971 forty member organizations have paid dues to the Alliance. Partial financial grants have been pledged by the Commonwealth Fund, Corning Glass and the Wegman Foundation. The Alliance should soon become fully operational in the Genesee Region as an effective vehicle for health manpower development and planning.

"Welcome"

Walter Wenkert
Executive Director
Genesee Region Health Planning Council

The Genesee Region Health Planning Council functions in this ten-county area through a general staff and with strong county planning groups in each of the ten counties. After several years we have come to this conclusion - that simple inventories of job vacancies and simple inventories of training programs have developed historically but not logically and that just more health manpower is not the solution. All of us will have to join in a planning effort to try to relate the health manpower training programs to the new and the old delivery systems. From this point of view, the Alliance has a tremendous challenge and a tremendous opportunity to unite the people who do the training, the people who provide the training setting, and the people who are interested in the training programs. This will take analysis, it will take guts, it will take determination, and, not the least important of all, it will take money. We in the Genesee Region Health Planning Council will be working with you to try to make this succeed. From this point of view then, we welcome you.

"Welcome"

Ralph C. Parker, Jr., M.D.
Medical Director
Rochester Regional Medical Program

The goals of the Rochester Regional Medical Program emphasize its concern and interest in the health manpower situation. Its program has included several aspects directed toward the improvement of the practice of physicians and nurses and their delivery of health care services.

Many of you are familiar with, and perhaps have participated in, the variety of postgraduate and continuing education for physicians and nurses which the Rochester Regional Medical Program has conducted in this region.

For some time the Regional Medical Program has been engaged in physician-nurse discussions about health manpower in ambulatory care. These have been led by Miss Edith Olson, Nursing Coordinator of our staff.

Two summers ago, in collaboration with the Genesee Region Health Planning Council and the University of Rochester Department of Nursing, the Regional Medical Program conducted a study of the complexity of office practice of primary physicians.

Currently Dr. Barbara Bates of the Regional Medical Program Health Service Division and Miss Joan Lynaugh of the University of Rochester Department of Nursing are planning a program to train nurse practitioners in adult medical ambulatory care. Dr. Robert Hoekelman of the Department of Pediatrics and Mrs. Harriet Kitzman of the Department of Nursing at the University have already developed a training program for pediatric nurse practitioners. These projects will help meet some of the health manpower needs of this region as seen by the Genesee Region Health Planning Council and the Regional Medical Program.

This conference to discuss health manpower and health service delivery is further evidence of the collaboration between agencies, educational institutions, and interested individuals.

Dean Orbison, from whom you will hear next, has been a great source of encouragement and guidance. Our participation in this conference and in the Alliance shows that agencies and institutions with common goals can effectively push forward in an area of great interest to those engaged in the better delivery of health care.

I would like to remind you that these meetings are jointly supported by the Genesee Region Health Planning Council and the Rochester Regional Medical Program. I hope that each of you will contribute to this meeting and take home something from it.

Thank you for joining us in this health manpower conference.

Papers

"The Health Care System -- New Models and Concepts"

Leonard W. Cronkhite, M.D.

In the past fifteen months there has been a traveling road show going across the nation, discussing new and innovative ways of delivering health care. The star actors are represented from Kaiser-Permanente, from the new city of Columbia, Maryland, from the San Joaquin Valley, and usually somebody from H.I.P. in New York. Occasionally cats like myself are allowed to participate in small cities. These individuals now know each other quite well, and, to the best of my knowledge, some or all of them have presented their scheme for a delivery system 208 times - under the sponsorship of the American Hospital Association, the American Medical Association, almost every major Medical School, most Regional Planning Councils, Regional Medical Programs, and a fair number of government agencies.

In the first few months of this rather bad grade B show each one of the participants was quite sure that he had discovered the only road to Rome and that all of this compatriots were totally wrong in what was able to be done in order to improve the health care delivery system. However, as the months went by, each was humbled by the other and we recognized that none of us really knew how to do it. Because of that, or perhaps in spite of it, the government has now latched on to a synthesis of these diverging opinions and embarked on two fundamental policy decisions which it is about to implement. One is the decision that if all these august people do not really have the evidence that their viewpoints are absolutely correct, the government's only posture is to support pluralism. Thus, pluralism is the red flag of the day and we are going to try doing things in multiple ways. So that it will not be a total loss we have coupled with pluralism a very careful and mandatory evaluation of every new venture, a procedure which we have not done in the past. Therefore, if we support pluralistic new plans, at some point in time their efficacy, and their cost, and their end product can be compared.

I was asked to mention the new federal target called H.M.O., or Health Maintenance Organization. I do not need to tell you that there is not anyone in the federal establishment that can define it, because nobody can. It is an idea which embraces the concept that some sort of an organization, called the Health Maintenance Organization, would take over or take on the responsibility for providing comprehensive health care to a specified population, preferably on the basis of prepayment, with periodic open enrollment, would raise all its own money, take all its own risks, and save the medical world. Somehow or other, that general idea has to be put into statutory form - and that is where we are hung up. I am certain that this technical problem will be solved. Therefore, we might look at what is possible and what is commonly believed about H.M.O.s or, if you will, new delivery systems. Here we will have a chance to expose in raw form my own personal bias, about which I am absolutely shameless this morning.

Leonard W. Cronkhite, Jr., M.D., is Director of the Children's Hospital Medical Center, Boston, Massachusetts.

First is the sponsorship. Theoretically, almost anybody can sponsor a H.M.O. It could be a group of physicians, a hospital, a medical school, a large corporation, a new nonprofit corporation, a union - it is wide open. Who does sponsor a H.M.O. determines in substance what it does, what its value system will be and what will be its need for manpower overriding other things. University sponsored H.M.O.s will carry with them the value system of academecians. H.M.O.s sponsored by groups of physicians will carry their value system into the organization and performance. H.M.O.s sponsored by labor will have a different value system. In a sense, sponsorship preempts outcome, and one has to accept this because the individuals in the various systems - the educational system, labor, management - do have built in biases and points of view which they will carry into all of their activities. I do not find that wrong, especially as long as we accept it; however, there will be a wide variety of perceptions and value systems which have primacy in the H.M.O.

Secondly, I should talk about financing, for that is where we seem to be hung up badly these days. Most of us on this circuit have agreed, at least in principle, that a medical care delivery system whose financing is dependent on annual legislative appropriations is a dead duck. It does not have long term viability because legislatures, like everyone else, respond to pressures, they change their priorities, and, though there may be a deep commitment to health this year, there is no guarantee that it will not be highways next year. If you have to go to the legislature to provide for an annual handout, you probably cannot survive over a long period of time. Like the late Mr. Reuther, most of us have determined that most of the money for a new health delivery system must come from the monies that are already in the system - the $70,000,000,000.00 we are currently spending on personal health services. That much money must be redirected and reallocated for it would appear that there is lots of it there.

The second principle, which I think is a reflection of the present administration, is that when we can we must use money from commercial sources, as other industries do, rather than depend on block grants from government. In other words, we are going to be expected to take the same fiscal risks and, in so far as possible, use capital sources available to other industries.

The third financial thing that I would like to talk about is to divide the financial problems in starting an H.M.O., or starting any new delivery system, into six segments and show you that each segment has a specific problem with some potential specific solutions. Steeped in our culture is phase one, the planning phase. Until now timing has been allowed to go on indefinitely. However, there is a legitimate planning phase and, generally speaking, that should be and can be direct subsidy from some level of government or from private philanthropy, if it is contained in a reasonably short frame of time and is not outrageously expensive.

Presumably after one plans he builds. The second phase is construction, and this is where the commercial money comes in. Because of the great surge of interest by developers wishing to build the provider's facilities and then lease them back to the provider, this becomes a perfectly

acceptable line item of cost and it is a good way of getting around a total dependency on such things as Hill-Burton and other federal construction programs. Also, the developer can put up a structure much more quickly than when you are dealing with the stars and stripes forever.

The third phase is to start operations. This is the tough one for it means acquiring manpower and staff and trying to enroll patients. If you are totally clairvoyant you would keep these apace and have your marketing effort and your acquisition of staff match one another perfectly. Nobody has ever been able to do that so that there is the starting capital necessary just to get going.

The fourth phase has to do with what we call cash flow. You have all your personnel, you have enrolled a large number of patients, and you render the service; however, you find that you are dealing with public agencies and do not get paid until six months later, so that you have a huge gap is cash. The solution seems to be short-term commercial loans or government secured loans. Since your accounts receivable presumably are good accounts you can borrow on them like any other industry can.

The next phase is theoretically, the phase of equilibrium where your income and your expenses equal each other. Some think this can be achieved for each operating unit in about 24 months.

Finally, there is the phase where you would like to expand and repeat what you have just finished doing. This means that you must have a mechanism by which you can do what Kaiser-Permanente does, to set aside operating reserves so that you can do the next phase without having to go back to the government for another starting bonus.

I seem to have spent much time on financing; however, at this moment that is the only way there is to do it, because we do not have universal acceptance by all payors - Medicare, Medicaid, Blue Cross, and the commercial insurance industries - to go into complete prepayment for all personnel whom we would like to take care of. Many of these problems would go away if we had universal entitlement, but as of the moment we do not have it. Therefore, you will have to go through these fiscal gymnastics in order to get any new thing off the ground.

Now let us move from financing to the services we are supposed to render under the banner of comprehensive health services. Most people have not really looked at the problem hard enough so that they understand what the content of comprehensive health service is. For our purposes this morning I would like to divide health services into three large grab bags, because each presents a different problem. I will call the first bag direct medical service. In its simplistic fashion, direct medical services relate to the treatment of disease - disease defined by the care. This eliminates in direct medical services all those things that relate to health which cannot be categorized as disease - and therefore you cannot get paid for doing it. That is a pragmatic, realistic view.

The second category of service, for lack of a better word, is called social health needs. These are phenomena which directly relate to health; however, since they are not categorized as diseases by the care, we usually cannot afford to offer them to our customers. Such things as family planning (not looked upon as a reimburseable disease), lead paint screening in the ghetto, sanitation, nutrition education, preventive services over a broad spectrum - we cannot do these things now unless we can draft some categorical money from some agency - a private foundation, the federal government, the state government - because they are not reimburseable under the strict definition of medical service. But who can deny that they are a vital part of the total health care picture?

Another group of phenomena is what we have called social welfare needs. These are such precise and overriding concerns in certain parts of the country which no one can deny are related to health, such things as housing, jobs, job training, public education, recreation, and the whole gamut of social ills which are recognized as related to health. Often medical people who enter deprived areas have taken on the burden of trying to solve this latter category under the banner of health. Needless to say, none of them have succeeded and most of them have been mortally wounded in the effort. To me it would seem that at this time the health industry should not attack this third category of human needs but limit itself to the first two. The point is that to start a new innovative medical system today, you can only afford to offer to your customers category one, direct medical service, because that is all you can get reimbursed for doing - unless you can get a subsidy from an agency to allow you to do a limited number or all of the second category services. That is the way it is and at the present time you are foolish to kid yourself that there is any other way.

The fourth thing I would like to mention briefly has to do with an arena in which I think you can be totally weak and imperceptive; that is the role of the consumer, the customer, the citizen in the development of any new or innovative health delivery system. My position is about midway between two extremes. The two extremes are easy to explain. On one hand, we can do what we have always done and just say "Let them eat cake"; or, on the other hand, we can do what some social philosophers think, let them have all the power, give them all the money they need, and they will solve their own problems. We have tried both and we are still paralyzed. Clearly, I think we have to find a middle position. Rather than taking the social philosophy and making it statute, or rather than closing our ears and eyes as we have done in the past, it is a good lesson to listen to what the collective voice has been saying over the last four or five years. What they are asking for seems to be not at all outrageous. One, they say collectively, "The setting in which I receive my medical care should insure my personal privacy, my dignity, and my sense of self esteem." I hear this universally. To me, this means no more store fronts, no more made-over warehouses, and no more ancient O.P.D.s in University Hospitals. I feel the same as these consumers do, that these are an affront to my dignity, my privacy and my sense of self worth. Two, the consumer has said, "No matter how you design the system, I'd like to find a single individual in it who cares for me and who

shows concern. I don't want to be taken care of by an institution. I want to be taken care of by a person." We are pretty well in agreement that some renaissance of the family physician, or a substitute for him, who has close and continuous relationship with a panel of families is a desirable thing to the consumer. Third, the consumer says, "I would like to have your system, and especially my doctor, available to me, within reason, 24 hours a day, and I'd like to have him located where I live so I can get to him." Most systems being designed today are having a decentralized geographic spread into smaller operating units and with 24 hour access, so that the patient is not forced to go to the system when he is well and to go back to the hospital emergency ward when is is sick. Fourth, the consumer has said, "If the people, especially the paramedical people and, in some part, the hospital physicians, were derived from the same ethnic group or cultural group that they are serving, it would be a lot easier to engage the consumer and the provider in a long-term relationship." One has to realize that the education of physicians has been available primarily to a rather elite group of upper income individuals who have quite common values, and when these people are transplanted among people of different cultural values the level of communication is appallingly low. Most consumers would like to see those individuals who are working in family care centers and their backup facility derived from their own background. This is where we come smack up against the problem you are addressing today, the training of manpower to make this possible.

If we can move from this birdseye view of what people have seemed to have said to another area, that of science and the evaluation of the problem. No matter what you do in education and training, no matter what I do in health care delivery, no matter how you or I finance it, sooner or later somebody will say to us, "Have you done any good?". If we rely on the usual Pavlovian reflex pattern, as we have in the past, we will say, "Of course I have. How can you doubt it?" However, in this era, they are going to say "Prove it!" Therefore, from the very first day, we must devise a plan to evaluate. Built into that plan has to be a data-set so that a third party can evaluate if it has done any good - periodically, constantly, and at intervals. This is a tough job, for in the health delivery system people are going to ask three generic questions: 1) For what you are doing, what does it cost?, 2) Are your consumers satisfied that they are locked into the system voluntarily?, 3) Has the quality of their lives or the quality of their health improved? To look at these nasty questions we are deriving a new group of professionals in the general arena called Health Services Research and Development. They, in theory at least, can devise a data base, woven intricately into the operating system so that it gets done, and designed to answer, at least in part and insofar as our present technology, problems in those three questions. Any educator or any health provider who believes he can make a new start or change the world without involving this evaluation will not get funded and will be terribly embarrassed in the future when all he has is his own personal record to prove that he is worthwhile. This evaluation phase is very difficult but absolutely essential in all new delivery systems and in all new manpower ventures. There have been too many hundreds of millions of dollars poured into programs about which even today we cannot get a firm "yes" or "no" if they worked because there are no data.

Next, let us talk about manpower. Here I suppose my biases are very broad. Let me speak from the employer's point of view, the health employer. I employ about 4,000 people, on any one given day, in an array of jobs which form 186 job classifications. About a month ago I had to do a very insulting thing. I took a group of Smith, Wellesley, Mount Holyoke, and Radcliffe College girls who had struggled to get a Bachelor of Arts or Bachelor of Science degree at these lofty schools and who were now applying at my hospital to work. I had to tell them the truth, that their four years of effort did not make them desirable to me as an employer because they could not do anything that I needed done. So they are receptionists at $85 a week. Down in the basement there is another group of young ladies who graduated from a program I started about four years ago, a program which is really a 13th year of public high school in the city of Cambridge and teaches them the one single skill of medical record technician. I employ those girls as fast as they can be turned out for $130 a week. Today I want to emphasize the distinction between education and training. In the past what we have attempted to do in the educational field in health is to mix up general education with specific training, to the point where, in many instances, we have produced a hydrid who is neither well educated nor trained well enough to get into the labor market. I know, for they come to see me for work and most of the time I cannot take them unless I teach them all over again in an in-service training program to learn the technical skills they should have learned in school, if that is what the school is for.

My second terrible bias is (and I think that this is well exemplified by some of the federal programs) that some branches of government and some branches of the educational establishment are saying that the last reservoir of manpower that we have available are the poor, the minority groups, the under educated, the drop-outs - therefore, train them for a skill and put them into the labor market in health. This sounds like a normal enough desire. On the other hand, we have another equally powerful group who say that, to ensure quality care, it is necessary for everybody to have a Ph.D. or its equivalent. Thus, we have the credential gamers and the social activists absolutely at loggerheads. I found myself so disturbed about this that we thought we would try the non-establishment route. About three years ago we received three million dollars from a private foundation and started a health vocational training school outside of the regular established educational agencies in the state. We probably went too far to start with; however, it was worth a try and it actually was not very disastrous. With two exceptions, eligibility for entry into any one of the twelve courses was literacy and motivation. Eligibility for graduation and job placement was the test as to whether or not the student could perform a task. In these twelve skill areas the students on intake varied from the third grade public school level to the second year junior college level in terms of their ability to perform on objective tests. Whenever you admit a group of people like that you lose 50% most of the time before graduation. The surprising thing is that upon graduation just as many who performed at the third grade level graduate as those who performed at the second year community college level. Furthermore, we decided that each course would have no

specific length but be geared to the student's ability to learn, and that we would only give a certificate rather than worry about high school equivalency or an associate degree. What are the characteristics of people trained like this? As an employer, I have looked at this very carefully. Most of them are a little over employed when they first start work. As an employer, I think that this is helpful. People tend to work harder and do a better job when they are stretched a bit. My lovely, long blonde haired Smith girls who were receptionists are terribly underemployed. They are really quite bored, they are not very good workers, and they are not being stretched intellectually. Also, the graduates of our vocational training school tend to be very stable in the work force. From a purely pragmatic standpoint, it is good for the system in that they tend to stay in, provided you can give them upward mobility. As long as you have thrown away the credentials, upward mobility is possible. If you insist on credentials, upward mobility is impossible for most people. Another thing about them is that they tend to take much more interest in their jobs and to think about promotion as if it were a reality, more than most general employees.

All of these things seem totally unpopular with the normal educational establishment, but popularity is really not what we are talking about today. We are talking about the resolution of what will be an incredibly large manpower problem, especially in the associated or paramedical skills which at present do not require the same level of general education credentials as some other professions do.

The distribution of this manpower is such that in some areas there is a very apparent and crucial shortage while in other areas there is not an apparent shortage. Our question now is to try to devise a new delivery system around a rather small core of highly educated and highly trained individuals supervising the efforts of a large mass of just normal human beings who have been taught to perform a useful task and are rewarded appropriately for it and who are not locked into a dead end system. We are neither anti-intellectual nor anti-vocational training; we must have both. The proportion is maybe about ten to one. In order to get both you have to bend a little in terms of your traditional perceptions of what education is versus what training is.

I would like to end by telling about my own plan, merely because it illustrates the things I can not very easily put into categories. It is one of the roads by which to reach Rome if the bridges do not wash out. It is a comprehensive health system to take care of 300,000 people. It has several characteristics which are not too unlike some things you will see in the national publications. The first characteristic is that all modalities of care are under a single management, that primary care, bed care, convalescent care, home care, and rehabilitative care are all managed by the same managerial team; they are all owned by the same corporation. It is a non- profit corporate entity which intends to build, develop, staff, and run all the modalities of care. Why does this have advantages? It means that if you have a bulk of 300,000 people you know almost precisely what their needs are in terms of facilities. For the first time you begin to spend money for facilities in a rational fashion because you know who it is for.

As a hospital director, when I put a new wing on, I do not have the foggiest idea of whom it is for, because the guy down the street may be doing the same thing. We find out we may be competing for the same patients. At least in a closed system we can spend money or put capital in rationally. Second, it would appear that the patient building block in this system has to be the family health center, or the private care unit, or whatever other rubric you want to attach to it. In our mathematical model of these private health units we find that one that falls below 10,000 patients or enrollees has unit costs so high as to be unable to really afford it. When the system gets up to 30,000 people the unit costs are quite low; however, the unit is so big that it is unmanageable and another hospital out-patient department has been created. Ideally we like to talk about units of about 20,000 people. We would like to get away, as I understand you would in the Rochester area, from going from a primary care unit to an acute general hospital. Thus, we have devised and attached to each primary care center about 25 infirmary style beds. How does this work out? The front line physician sees Mr. Smith in the primary care center and finds that he has two inguinal hernias. Most Mr. Smiths and most of Mr. Smith's doctors look on this condition as a relatively low risk elective hospital procedure which for most men requires about seven days in the hospital. In Boston we would normally say to Mr. Smith, "I'm going to take you to the best hospital in the world." (Ask John Knowles if you don't believe it - that's the Mass General.) "It will cost you $150 a day, you'll be there 7 or 8 days, and then you can go home." What we would like to do is to use the Mass General for one or two days and then move the patient back to our infirmary for the last five days at $40 a day. The savings are incredibly large. Mrs. Smith is a diabetic who is a little out of control, has a wet ulcer on her left leg, has been careless about her insulin and her diet. She really needs good nursing care in bed for about three days to readjust her diet, to get some good soaks on her leg, to run periodic urine sugars and blood sugars, and to get her readjusted. She really does not need to be in an acute general hospital. She can do just as well in this infirmary style at about 40% of the cost.

It would appear that in this model it would be possible in these infirmary style beds to test the primary care center, not only to reduce hospital bed utilization in terms of going to the hospital, but also to reduce the cost of bed care by having at least half of the days infirmary days rather than hospital days. Obviously, you have to start somewhere and you have to build a network of these primary care centers in order to be able to afford the backup facility, such as the convalescent bed, the infirmary bed, the home care programs, and the rehabilitation activities. The whole theory is to put all facets of medical delivery under one managerial and under one financial roof so that costs can be controlled.

The second major area is trying to get the population enrolled and engaged in a meaningful way, so that you are in fact managing their health rather than merely interceding in their illnesses. Let me give you an example of the extremes to which we will go in this area of general humanism. In our state we now have 200,000 people who speak Spanish; ten years ago there were 5,000. On a warm summer day they come in at the rate of 100 families a day. They are concentrated in the

Eastern cities. They can not get medical care because they are not bilingual. They have all come from farm regions in Puerto Rico. Their average level of education is such that of 12,000 eligible students in Boston high schools, three graduated from high school last year. They have a life style, a language, a folklore in medicine nobody in our state understands. Our proposition (and I have already done this) is to get a Puerto Rican physician, nurse, lab technician, and X-ray technician who have government time to pay off in Puerto Rico to pay it off in Massachusetts. The government of Puerto Rico and the Ministry of Health have both agreed to this. Thus, we will recreate in Massachusetts for this generation of new arrivals a setting of personnel, linguistic ability, and a perception of cultural values and life styles which is identical to that from which they came. In that way hopefully we can lock them into the system and engage them in a meaningful way.

"Evolution of New Health Occupations"

Joseph Kadish, Ed.D.

There are already 125 defined allied health occupations and 250 alternate titles. The question is: how did we get into this big mess? I am reminded of the World War II and Post World War II situations when transportation facilities were very scarce and overused and there was a shortage of gasoline and other fuels. There were signs everywhere "Is this trip necessary?" In relation to new health occupations I would paraphrase "Is this occupation necessary?"

How did we get into this situation of so many occupations, so many jurisdictional disputes between occupations, and frantic efforts of administrators to settle on who does what in the health facility.

A number of factors have contributed to the development of these new occupations. Dr. Cronkhite mentioned the new attitudes towards health services and the new scientific and technological developments. George James, Dean of Mount Sinai School of Medicine, has described some of the differences between medicine of yesterday and that of the future that help us realize why people feel that they must develop new manpower types. In the old days our medical or health system was designed to serve people with acute illness, mostly infections. Now there is more emphasis on chronic illness care and on health maintenance. In the old days illness was frequently due to natural hazards. Today illness is increasingly brought on by manmade hazards, such as automobiles and environmental contamination. Yesteryear solo practice predominated; in the future is group practice or some kind of organized and rational arrangement. People used to wait for symptoms to go to the physician; now people want to go there not so much for symptomatic treatment but for preventive care. In our family and with a frugal father, we had to be nearly dead before going to the physician. He said, "Let's wait until tomorrow. Are you green? Let's wait until tomorrow." We waited until tomorrow and finally, reluctantly, we did sometimes have to call the physician - but that was very rare.

Many more changes have created needs for more kinds of care. Outstanding is the scientific and technological developments by which medicine can do more - and when we say medicine, we really should say health care can do more. We are also bringing in the social and preventive aspects of health care. Therefore, it is presumed that we need many more people and at least some different kinds of people.

People also have greater expectations about health. They realize that the health care system and the health care technology can deliver more. More people are aware of the values of health, although sometimes we are amazed at what people do with their health when they have it. Nevertheless, there is a strong demand for health. One interesting facet is that very often improvement of social factors serves to improve our health as much as the health care delivery system.

Joseph Kadish, Ed.D., is Acting Chief, Educational Program Development Branch, National Institute of Health, Bethesda, Maryland.

Another strong influence has been the growth of our educational system. Now seventy junior or community colleges are being opened each year; only a few years ago there were about fifty per year. These junior or community colleges are geared to respond to local needs - the needs of the community for general education and, in some, for the technologies.

Everybody seems to perceive his own need in isolation from general and national needs. The inclination then is for someone to say "I need more of such a kind of person." For example, a hospital may have a kidney dialysis unit and it says "Let's develop kidney dialysis technicians." The community college, eager to oblige, develops training programs for kidney dialysis technicians. Sometimes there is no thought about how many will be needed next year or the year after, or how this is related to existing occupations. Thus, the junior college has been a factor that has accommodated to the needs of the various health care delivery systems. And previously the manpower needs of the Health Maintenance Organizations were mentioned.

What are the consequences of all this proliferation? Why are so many people concerned, especially the people in the federal government who deal with the many proposals to develop new types of health manpower. There could be some dire consequences. My good friend, Al Light, who will be on this program in April, has said "Are we really justified in developing a new occupation or shall we think about what we can do with the occupations we have?"

What happens with the overzealous people engaged in a new occupation? First, a group of people with a common identity form an organization, a national society of such and such. Next, they develop a technical jargon, and Al says "They keep the ins from the outs." They use their own terms and this blocks up the lines of communication which he says are already corroded and atherosclerotic. Then, of course, they start to develop their own wage scale and have to negotiate with administrators - and who would want to be an administrator negotiating with 125 different occupational groups!

There are also jurisdictional disputes. I remember that after World War II in the same Veterans Administration Hospital we had a group of people called corrective therapists, another called physical therapists, and still another called recreation specialists. There were three people pulling each patient for some recreation activity. The corrective therapist said it was his role, the physical therapist said it was his, and the recreation person said it was his - all pulling at the same patient.

Too, there are developed all kinds of specialty requirements and curriculum requirements, and finally a quarter or a term of dubious "additional merit." So a new health occupation is born!

Beyond that, they want to get licensed, primarily because they want to protect the public! You wonder whether that is the case or if it is to protect the occupation. New occupations can come like a cold and soon there are left toenail clippers and right toenail clippers. You can see all of the colossal waste. However, this is about where we are, because in the allied health legislation administered by the Division in which I am employed, there is a provision for training

ophthalmic assistants and another for training optometrists. You know that there must be certain commonalities about anatomy and physiology of the eye, various instruments, various measurements, etc. However, there is not one occupation but two - and there are persons who wish to keep it so.

Of course, we are very concerned about this proliferation. "Is this trip necessary?" Generally, the answer is "no". On the other hand, one rather common phenomenon is the establishment of different levels within the same occupation. To a great extent I think this makes much sense. We could very well refer to nursing. Of course, I cannot talk about nursing because that is a separate Division in our Bureau; I can only talk about allied health. But for years nurses have had the division of labor and levels of occupations. Each of such occupations or professions as medical technology, occupational therapy, and physicial therapy has now developed intermediate categories, whereas formerly everyone insisted that we needed only the top trained professional to carry out all the needed work. There is now a recognition that professionals have been working below their level and below their capacity. A number of well documented nursing studies have shown this. Also, some studies have demonstrated that medical technologists are drawing blood, doing routine urinalysis, and generally not using their time adequately. So the concept of the two year technician has been established and is getting wide acclaim. This practice seems to be a sensible division of labor, so that you do not have highly trained people using their time unwisely, and you have capable people doing certain nonjudgmental tasks just as well or better. This is a better mix of employees. In addition, there is the aide level person who can do the basic elementary things within this hierarchy of elements - and maybe there is justification for adding more. There is also talk about advanced medical technology or advanced radiological technology which approaches what is done by higher specialists.

In the area of specialization there are so many technological and scientific developments in health care. The literature shows the newest kinds of hospital equipment, monitoring equipment, and computerized equipment; everyone is using equipment. In hospitals interns and residents struggle with equipment. There seems to be justification for an equipment specialist or an equipment technician in a health facility to keep this equipment in good order and even to instruct other people to operate it. Another new occupation might be a nuclear medicine technologist. Great advances in nuclear medicine require a body of knowledge and certain special skills. On the other hand, we need to be quite cautious about how we develop new occupations and how long we cling to the old ones.

The government, particularly in new legislation, has been very aware of new occupations and places some guidelines on how they are to be developed. The new legislation called the Health Manpower Training Act of 1970 has provisions for a whole range of special projects, one of which is the development of new types of health manpower. In addition to the general criteria for evaluating proposals and applications, we developed a single sheet "Guidelines for New Types of Health Manpower" of the factors the applicant should be especially aware of. What will be the duties, functions and responsibilities of the new category of

person in comparison to what people are doing in existing occupations? What new knowledge will be required? How will this occupation relate to existing occupations? What kinds of supervision are necessary? Are there any proposed transfer of duties and responsibilities from existing occupations which should be stated to prevent later jurisdictional disputes? What is the situation as to cost? Will it be any less expensive to have this new type of person or can we add on some training to existing types of people? What is the future quantitative demand for this kind of person? How many will be needed? Many proposals tell us that a new person is needed and that 30 will be trained the first year because there are 30 vacancies. What will the project be doing the second year? Developing 30 more? If 30 more are developed, maybe 25 will be unemployed. Remember that we talked about the teacher shortage a few years ago; we never thought we would have an excess of teachers.

The national projections for health manpower are for increases to the point where health industry will be the largest single industry by virtue of the number of people employed. Nevertheless, each program developed must have some short term goals as well. How many people will you need next year? The year after that? Who can actually be employed? We suggest that you use the demonstration project if you are going to have a new occupation - try it out, see if it works, see if they are going to get into the hair of other workers, see what they can do, and see what level of accomplishment they can achieve. About the legal aspects, is there a need for certification? Is there a need for licensure? How will the new type be accepted by potential employers and the public? How will they be recruited?

The American Medical Association, also quite aware of this proliferation of new job titles, has produced guidelines for the development of new health occupations which are really more explicit than ours, and, of course, they relate more to the practice of medicine.

With regard to the new occupations, the effort is often towards having them licensed. There are a couple of new occupations presently working on licensures. At least three major components within the United States have recommended a moratorium on licensures until they can study the situation - the American Medical Association, American Hospital Association, and H.E.W. In the new legislation there is a provision for the Secretary of H.E.W. to submit to Congress a report on licensure, its existing problems, and recommendations on how it should be handled. Another study is being conducted by Dr. William Selden on accreditation and its related problems.

Some people believe that we already have too many occupations and that maybe we should reduce many. The U.S. Navy Hospital Corps and Medical Corps are looking closely at their training programs. Where once they had 45 specialist programs beyond the basic corpsman training, they believe there are many common elements that will reduce this to twelve clusters or cores. This raises such questions as where do people learn specialization, where do they learn the particular components of their

jobs, how do they adjust to new occupational demands. Dr. Cronkhite said that he would like people to come to the job with the skills to do the job. I believe that we should think of another possibility - more generic training with some basic skills; general understandings so that people can adjust to specific jobs and specific roles. For whatever the profession, one has to learn a good bit on the job itself and in continuing education. Someone once complained that medical technologists in training perform only certain tests and when they go to work they have to do tests that they have never learned. They also learn certain tests in training which they will never have to perform. I do not think this is wrong. The important and significant factor is knowing the basic skills of how to learn. This would prevent some of the obsolescence that comes from highly specialized training in the educational training program. Much training ought to be on the job, I think.

In general terms I have enumerated the cautions that should be exercised with regard to new occupations. In summary - say "no" whenever you can.

I'm supposed to say a few things about physician assistants, considered to be a new occupation, although people will tell you that we have had physician assistants for a very long time. Nurses have worked as physician assistants; many kinds of people have been trained as physician assistants. However, there has not been any formal recognition of them, with a consistent curriculum, with a consistent identity, with a consistent virtue that could be properly used and understood. Physicians of many types and varieties and the nurse specialists have performed and are performing many duties and functions that are below their level of skill. Pediatricians say that about 80% of what a pediatrician does could be done just as well by someone with less training, particularly well child care and handling mild problems and certain screening procedures. The current physician assistant concept was started by Dr. Eugene Stead at Duke University about five years ago. Not too long ago about forty active programs were listed; now there are over 100 in various stages. However, in reality, there are only a few programs that are producing physician assistants and very few that actually have graduates. Someone has said that for every two physician assistants there is at least one journal article. It is inescapable that we need physician assistants. Considerable federal monies should be used to train physician assistants. (President Nixon's Health Message did include this.) I believe that they will be a common denominator; however, there need to be such cautions as: how many varieties should there be, should they be in general or specialized training, etc. The same chaos that I mentioned about new occupations is compounded when we talk about physician assistants. Through the joint kind of consortium arrangements, as you have in this Alliance, you can avoid much independent striking out to develop specialized programs in each community. Get the input of everybody you can and the program will develop on a sound consistent basis.

"Expanded Use of Existing Health Personnel"

Mary Hill, R.N., Ph.D.

"Good health care should be readily available to all our citizens," President Nixon told Congress on February 18th. In a message on Building a National Health Strategy, the President warned:

> "It will not be easy for our nation to achieve this goal. It will be impossible to achieve it without a new sense of purpose, and a new spirit of discipline. That is why I am calling today not only for our new programs, and not merely for more money, but for something more -- for a new approach which is equal to the complexity of our challenges. I am calling today for a National Health Strategy that will marshall a variety of forces in a coordinated assault on a variety of problems."

Health and medical care are hot political topics in 1971. The concept of the "right to health" appears to have been accepted by our society; and with acceptance of this concept comes the responsibility of providing more and better health services for all of our citizens. Legislators are now hard at work projecting new ways to finance care, including: a variety of "insurance" options; new delivery systems - for example, health maintenance orgainzations; and new cures for old ills, such as cancer and sickle-cell anemia.

At the heart of the whole health care problem is the dilemma over manpower. Words used to describe our current manpower situation have ominous sounds, like "critical" or "catastrophic". We are all aware of some of the issues around the manpower problem, including: Numbers - too few; Distribution - large geographical areas uncovered; and Utilization - both professionals and non-professionals not working to the limit of their knowledge and skills.

Today, we have heard about the need to work together in a multi-disciplinary team. We have heard about a number of new health occupations. Now I would like to speak to the problem of better utilization of our existing manpower, and to explore briefly with you how we might expand the roles of existing health personnel.

If I were to ask who are these existing personnel, you might answer: doctors, nurses, dentists, pharmacists, social workers, and on down through the list of health workers. Each of these now has a role definition with boundaries that expand or contract, depending on the variety of situational variables. We are aware from our observations of history that, as scientific knowledge and technology advance in any of the professions, there is a general shift in roles and functions of the other health team members. Sometimes new team members are introduced to pick up tasks which are delegated, or existing groups assume responsibilities which have not been delegated to them before.

Mary Hill, R.N., Ph.D., is Acting Chief, Division of Nursing, U.S. Public Health Service, Bethesda, Maryland.

Examples of this re-alignment include such procedures as skin puncture - for years a physician task, now done routinely by health workers other than physicians. Or we can look at the influence of technology in the delegation of both tasks and judgmental decisions - as seen in coronary care units, dialysis units, and other special care facilities.

First of all, I need to say a word about semantics. When we use words like "expanded" or "enlarged" role, it is suggested that we have added to whatever existed. We now have the initial role, plus. In reality, however, when we add authority to make a decision - or new tasks - to one end of the continuum, we almost routinely subtract from the original role some of the less sophisticated portions, and delegate them to groups lower in the hierarchy. Hence, I like to think of the words "changing roles", rather than "expanded" or "enlarged".

The decision to introduce new groups, or to change roles of existing groups, or to use a particular mix of the two, needs to be a thoughtful decision rather than an impulsive one. The consequences of such a decision remain with us for a long time, and we know it is always easier to introduce groups to a system than it is to abolish them. With this in mind, I would like to examine with you how the role of the group with which I am most familiar - nursing - might be, and is being, changed.

The NLN Council of Baccalaureate and Higher Degree Program Ad Hoc Committee to study the nurse's role in the delivery of health services suggests that the existence of specific characteristics in a situation determines the role, including:

1. The needs of the patient, family, or group of persons, are highly specialized.
2. Highly-specialized scientific knowledge and skills are required in order to deal with the patient's needs.
3. The situation consistently accepts the nurse as the appropriate individual to function in the extended role, and makes it possible for her to maintain this role continuously.

Nursing has had within its professional group a number of specialty pockets whose members have practiced in a manner different from that of the traditional bedside nurse for many years. Examples include: nurse-midwives; nurse anaesthetists; public health nurses; as well as many nurses employed in private physicians' offices. These nurses have all had either formal course work, continuing education, or individual on-the-job training for their added responsibilities.

During the past several years, the nursing profession has been attempting to reassess its practitioner role, and, as a result, there are many changes in educational programs. University Schools of Nursing are educating nurses on masters and doctoral levels with sophisticated curricula in a variety of clinical specialties. Graduates of these programs are capable of filling complex nursing roles. While the number of graduates of these progrsms is small, they

are making an extremely important contribution as teachers, clinicians, and researchers.

In an effort to improve the delivery of patient care, a number of continuing education programs have been introduced. These programs build on the professional education and experience base, teaching nurses additional knowledge and skills.

The Division of Nursing is funding several of these programs, including pediatric and family nurse practitioner programs, as well as a program for nurse-midwives. In these four to twelve months' long courses, a combination of didactic and clinical experiences assists the nurse to prepare for her changing role.

Many nurse-educators view these "role extender" courses as a temporary move, a part of a transitional process. They suggest that within the next decade, graduates of all professional nursing schools will be skilled nurse practitioners, and that material now taught to graduate nurses in the role extender courses, i.e., history taking, the more complicated diagnostic procedures, etc., will be an integral part of basic nursing curriculum.

A number of interesting things have happened as a result of these continuing education programs for nurse practitioners. First, nurses have had to look critically at the role they are filling now and decide if the additional functions are functions they could and would choose to do.

Second, this program has brought about collaborative efforts between nursing and other disciplines. In the case of the pediatric nurse practitioner, for example, the curriculum had to be developed by nurses and pediatricians. This, in turn, stimulated the production of a unified position statement from the ANA and the American Academy of Pediatrics - an historical first, and further evidence of collaborative effort.

Third, these short-term educational programs have brought into practice nurses who were not part of the current working force. Nurses who had "retired" to have families, found it possible to return for courses of limited duration; and they report that the additional responsibility and patient contact give great work satisfaction.

These are some of the positives of using existing professionals. As you are aware, there are many issues and unanswered questions related to the whole problem of changed roles which apply not only to nursing, but to any health professional group involved in the process. I would like to list a few that seem most important to me. Perhaps you can think about them and explore them in another session.

1. How will these professionals' changed roles fit into the health care pattern? Where will they work? - To whom will they be responsible? - What will be their relationship with other members of the health team?

2. Should expanded roles be directed toward specialty training or be of a more general nature?

3. What guards need to be built in to assure safe and high quality care to the public? Is licensing or accreditation an appropriate route?

4. How is this changing system being evaluated? Are evaluation devices built-in which will influence the direction of future decision-making?

5. The reward system suggested for nurse practitioner roles and physician assistants is considerably higher than now exists. What effect will this have on salaries for personnel in traditional arrangements?

6. Have we looked at long-term goals? - Or are we so involved with handling immediate problems that we haven't worried about the basic problems?

7. Our primary concern is improved patient care. How do the patients - our consumers - really feel about the modifications we are suggesting? Can we involve them more effectively than we have to date?

This list could go on, but I think I've shared enough of the unsolved problems to stimulate your thinking.

As I was thinking about this, I couldn't help recalling the tale of Pandora's box. This subject, like her box, was easier to look at packaged than opened. I trust that we - like Pandora - after all the woes and problems have come out, will find Hope for workable solutions.

"Health Team Relationships"

Evan Charney, M.D.

This morning I will present some of the problems of moving out of the planning phase and going operational. Our experience for the past three years has been the operation of the Rochester Neighborhood Health Center, an OEO funded program. It has been focused in the central urban area. Currently there are 12-15 nurses working as nurse practitioners - nurse clinicians with about 25 family health assistants. In the past few years we have also had some experience with training nurses for private pediatric practice. We have just concluded the study of 1220 families, half of whom have the nurse practitioner and the pediatrician and the other half the pediatrician alone. Let me assure you, Dr. Hill, that there have been several patients who have left the practice because of the nurse practitioner. Finally, we have had some experience in a training program for pediatric house staff at the University of Rochester in which we have had them work with nurses as they are going through their training.

All of this focuses on team relationships in primary care. That is where our experience has been. That is where, I think you all would agree, the problem in the nation is - an inadequate supply of primary care personnel - or at least that's a major proportion of the problem. I use a rather loose definition of primary care as that level of care that can be practiced by a well trained family physician, internist, obstetrician, and pediatrician. This accounts for about 90% of all medical care needs that a person will have. Of course, the remaining 10% is a small but very important aspect of health care as well.

The first step in considering roles in primary care for persons other than physicians is a careful analysis of the job itself. It is extremely important to do a detailed and specific job analysis. What is it that the physician is doing? For example, five years ago when we were anxious to begin a pediatric nurse practitioner program, we were assured by Rochester pediatricians that, although reports from pediatricians in other parts of the country indicated that they spent about half of their time on well child care, Rochester pediatricians thought that an excessive figure in their own experience. We spent about a year doing an analysis of their activities and found, to no one's surprise, that they were spending 56% of their time in well child care. A similar kind of job analysis for obstetrics and internal medicine would be useful as well. The second step is to consider what things should be done that are not now being done and what could be done better - things now done less than desired because of the characteristic pressures of time and patient numbers of primary care. For example, all 3-4 year olds should have adequate vision screening to detect preventable disease. In fact in most practices at present only a fraction of 3-4 year olds are adequately screened.

Evan Charney, M.D., is Associate Professor of Pediatrics, University of Rochester School of Medicine and Dentistry, and Director of Research and Evaluation, Rochester Neighborhood Health Center.

The third essential step is to separate those aspects of the job that can be done as well or better by less expensively or extensively trained personnel.

These are fairly simple guidelines for the job analysis. However, a word of caution: there are aspects of primary care that are subtle and difficult to submit to time and motion or cost-benefit analysis. For example, there is evidence that a computer can take portions of the medical history more reliably than the physician or nurse. The computer never forgets to ask such questions as when were you married? or when were you born (if you can remember that)? However, there is something about the physician who says, "Come in. Have a seat. What seems to be the trouble" that is therapeutic as well as diagnostic. Trying to isolate and system-analyze risks losing the most important aspect of our practices.

With these constraints in mind, let us look at the relationships between persons in primary care on the health care team. There are three major kinds of relationships that we must understand. I am indebted to Dr. Barbara Bates and others who oriented us to this kind of thinking.

The first kind of relationship in primary care is typified by two physicians practicing in partnership. They have a separate but equal type of relationship. It is practical, it works, there is some interaction between the two as to who will divide up the properties, etc., and who is going to cover which nights. By and large, they conduct their practices independent of each other and call on each other in only a consultative way.

A second common kind of relationship is the superior-subordinate relationship. This kind of relationship is common in many office or hospital settings. It is characterized by the physician occupying the superior position, of course; subordinate roles include the receptionist, the record room clerk, the technician, the person who weighs and measures patients, or the person who gives immunizations. All of these are basically technical and repetitive. Group organizational theory declares that a superior-subordinate relationship works best when job demands are well defined, static, repetitive; when required decisions are simple ones, but need to be fast and efficient. Certainly these kinds of tasks are common in primary care as well as in much hospital routine. Unfortunately, most physician-assistant relationships are limited to this kind of pattern alone.

We have had some experience working with a third kind of relationship in primary care - one in which the physician and nurse share certain aspects of the job in a co-professional or inter-dependent fashion. There are jobs which are clearly the responsibility of the physician, usually his traditional diagnosis and prescription type tasks. There are aspects of the job which are clearly traditional nursing, the supportive or guiding kind of role. Finally, there are jobs in which the two overlap, in which either do the task equally well (for example, developmental counseling).

Primary medicine today is typified by the reduction of the number of the acute life-threatening diseases and the numbers of conditions under which rapid decision making must occur in emergency room style. It is increasingly characterized by the impact of social, psychological, environmental and cultural factors which affect management of a patient's problem. One issue I would take with Dr. Cronkhite is that it is not easy to say where type one medicine and type two medicine begins. We can make some heady mistakes if we assume that diagnosis and management are all that are required in primary care. At any rate, I believe that this is not just a characteristic of the urban indigent; we have seen this in practically all of the middle class population as well. All we are saying is that the degree to which skills other than the traditional medical ones are required, in order to manage problems in primary care, is the degree to which there is a role for another person in a co-professional relationship.

What advantages does this third kind of relationship, the collaborative one have? This is where that dirty word "evaluation" comes in. However, we must be able to show that this kind of a relationship can provide at least equal care without increasing costs. We have abundant data that it satisfies the physician, the nurse, and the consumer. Although in the previously mentioned study in private practice about 10 patients dropped out because of dissatisfactions with the nurse, during that same two-year period about 25 patients dropped out because of dissatisfaction with the doctor. By and large, I think this kind of a role for the nurse has been well accepted by patients. We have preliminary evidence that it provides better care; however, this is difficult to assess. This approach certainly has the advantage of greater flexibility of care, for one aspect of this kind of relationship is the mutual support it can provide doctor and nurse. This "mutual support" is not typically found in superior-subordinate relationships. Any good physician, or nurse for that matter, can provide comprehensive care as long as they have to take care of a limited number of patients. However, as soon as the volume begins to increase, which is typical of primary care, the mutual support characteristic of the co-professional relationship become very advantageous.

What are the barriers to this marvelous relationship? They are many, let me assure you. First is the nature of the fields we are talking about. Traditionally medicine is attractive to people who like to work independently, who want to be at least authoritative if not authoritarian. Medical school training and subsequent practice experiences tend to reinforce these tendencies. If the medical student did not have this when he came to Medical School, he certainly has it after he has been practicing for five years. On the other hand, nursing has emphasized the passive-dependent, if not passive-aggressive type of role. To this point nursing has sought people with these characteristics, and the nurse is rewarded for this type of behavior, both in nursing school and in practice. Medicine, in addition, has a more extensive and prestigous body of knowledge than does nursing. Thus, the nature of the fields themselves mitigate against this kind of a relationship.

Second, there are a host of psychosocial factors (age, sex, social class, income, educational level) in which most physicians have the upper hand - generally they are older, from a wealthier background,

and are better educated. Of course the male-female relationship has not been as equal as it might be either!

Third, our experience has been that this kind of a relationship may require persons of greater ego strength and greater maturity. This relationship involves a sharing of responsibility, a questioning of each other's knowledge and skills, and so may be threatening. People who are not secure in their own position and who require an authoritative relationship grow uneasy in this kind of a position.

Finally, our experience is this relationship is difficult to transfer. It is unlike the readjustment to getting a new boss or a new employee. After a relationship is built between one nurse and one physician, the change involved in those people requires almost starting over again. It is not made easier by the first experience; in some ways it is made more difficult.

On the positive side, what are factors that enhance the development of a co-professional relationship? First, it is absolutely essential to separate the technical tasks from the professional ones. As the nurse takes on additional roles, as is deemed correct by both the nurse and the physician, it is absolutely essential that she be relieved of the technical jobs that another individual can do. It is not possible to have one nurse do both tasks at the same time.

Second, the nurse needs careful training, not only for skill tasks but for this attitudinal relationship. If the nurse is older and has been recruited back (and we have many such with impressive nurse skills), she may need to unlearn much of what she had learned. If she is a new nurse coming through, the relationship between aggressive feminism and independence may be a fine line and she will have to learn some of this relationship.

Third, the physician needs at least as much training and orientation. It is unwise and unsuccessful to place a well trained and well oriented nurse into this kind of a role where the physician is unprepared - and preparation is not just a half-day seminar.

Fourth, this kind of a relationship works best when the nurse and the physician are exposed to it during training. In addition to teaching people while they are still flexible, this serves the further important function of attracting people to the fields of nursing and medicine in primary care who enjoy this kind of relationship. It holds out a satisfying career to them.

Finally, I believe that this co-professional relationship promises primary manpower expansion, at a more reasonable cost, while retaining or enhancing quality in care. If we can reach those goals, we will have made much progress.

"New Systems for Educating and Training Health Personnel"

Israel Light, Ed.D.

My first reaction to being a lead-off speaker was to consider putting together a series of generalized statements to serve as a framework to house and put into place the comments of the speakers to follow. I am quite capable of mouthing gorgeous platitudes with the best of us. But I reconsidered. First, it would be presumptuous of me. Second, we've all heard the platitudes before. Third, as an activist I could hardly settle for a series of generalizations. Fourth, as an educational maverick it would be out of character for me to present some high-sounding phrases.

So, I have elected to be myself and risk some embarrassment because of the occasional coincidence of relationship between my Biblical name and the fact that my comments may sound like a combination of Jeremiah and Isaiah. You will remember that the former berated the multitude for their sins and the latter dispensed great wisdom. But I must publicly declare no talent for either rectitude or genius, and least of all am I a prophet! The soundness of my observations may be subject to question but my courage.....never! Therefore, I may rattle some skeletons in our professional closets.

A number of assumptions and procedures in education have been with us for so long that age has cloaked them with the ring of immutability and universal truth. We have to dig into some of them. But lest any of you feel unduly offended, I urge you to listen as well as hear because it is my clear intent to suggest evolutionary changes rather than revolutionary ones. It is most important that we make changes in education and training within the Educational Establishment so that we innovate while we retain what is good and true and reasonable and relevant in the so-called "old ways."

If I sound cute, it is because I want you to remember a point. If I sound oversimplified, it is because I do not wish to belabor a point. And if I sound general, it is because I want to flag an issue but reserve discussion of its nuts and bolts for later in the day.

Any changes in education and training for the health occupations should and must include the physician. This is a first major obstacle because the physician says, in effect: "Sure, go ahead. Train as many of anybody you want to help me. Just don't nobody muscle into my territory!" This notion has to go. Although I resent and question the observation that only physicians have a sharp focus on changes to be made in their world, I respect it and will discreetly leave their problems to them, at least for today. After all, there is much to be said about the rest of the health team, who consitutute 75% of all those currently working in the medical-health field.

There are limitations and shortcomings, as they relate to education and training, in the medical profession itself, within the allied health areas, within the field of education, and even within our culture.

Israel Light, Ed.D., is Dean of the School of Related Health Sciences, The Chicago Medical School/University of Health Sciences, Chicago, Illinois.

By way of suggesting that no one's hands are entirely clean, I will identify some of them for detailed examination. It usually happens that the very identification of certain problems suggests solutions and at least target items or areas of concern.

There are problems within the medical fraternity itself.

There is little discussion and analysis of the health team concept, and what little there is is very hazy and confusing.
Some unfortunate jurisdictional disputes still persist, such as psychiatrist versus clinical psychologist, ophthalmologist versus optometrist, orthopedist versus podiatrist, etc.
Medical specialty leadership has yet to come to grips with the distinctions to be made between legitimate specialization and unwarranted fragmentation.
Some quite unrealistic requirements are made of supportive health people while in training, such as the 2,400 hours of practical experience for radiologic technologists.
If there is such a thing as a health team, then those who work together ought to learn together. Yet I see practically nothing of this going on in any medical school.

The allied health occupations have some problems, too.

We are faced with the many stranglehold, guild-like, idiosyncratic regulations of the many national professional Societies.
There is clear hesitancy and unwillingness to develop occupational or job or task analyses to differentiate clearly competency levels.
We have yet to develop entire series of educational equivalency tests for measurable amounts and kinds of on-the-job experiences. A beginning has been made in a few isolated places.
We find the urge toward professional status. As a result, education and knowledge are both prized and equated with status, so that competency and skill are relegated to the second-class citizenship furnished by vocational education.
We are faced with the inflexibilities of the various regulatory mechanisms, such as accreditation, registration, licensing, and certification.
Health occupations recruitment literature is not sufficiently realistic.
We operate under the still unproven assumption that, because more of everybody is needed, let us just continue to crank out more of everyone and eventually everyone will receive appropriate health care and service.
Too many national professional Societies block advanced standing and educational mobility. I resent being placed on the defensive and being told that my baccalaureate nursing program, for example, will be considered experimental because I am dancing intimately with feeder institutions, when junior colleges have been training nurses for at least 15 years and now the National League for Nursing discovers the open curriculum.

The Educational Establishment is no paradise, my friends.

We find the continued slavish adherence to rote learning and regurgitation at examination time, at the expense of learning problem-solving techniques.
We still suffer from the notion that the end of formal schooling represents the end of learning.
The drive for the credential has become so overwhelming that warm bodies are passed along and the 12th grader is given the diploma with at best only a ninth-grade reading ability.
The concept of "core" is still quite hazy for most of us.
God forbid that we should find out that we might learn something outside the classroom; hence, we have no credit given for what we have picked up on the job.
We have failed to aggressively explore the potential of the newer educational technologies such as closed circuit television and programmed learning - and I have been waiting for a long, long time. I worked on the first teaching machine back in the early Thirties under Professor Sidney Pressey at Ohio State, and I am still waiting.
We are hired to teach in higher education and then are promoted for any and every talent but teaching.
We are still not challenged to THINK in school. We all know some Ph.Ds, who, if we sent them across the street and sent a car down the middle, wouldn't have sense enough to go to the curb because they never studied how in graduate school.
We do not have enough teachers in the allied health field, yet those transformed from competent practitioners into teachers are given a considerably less than cordial welcome into the educational fraternity.
There is too much non-sensical empire-building. It is like the teacher-training institution that sends a curriculum committee into a near-by town to observe the work of janitors, and then returns to develop a Graduate Program in Custodial Science.
I get fed up at times even with the semantic gymnastics in which professional educators engage. Ralph Tyler, the famous behavioral scientist and educator, has noted that "research on the brain and in behavioral genetics indicates that the learning requirements in our schools and colleges place no strain on the basic potential of a vast majority of human beings." Why could he not have said what we have all known for years, that most people are much more intelligent and capable than most school systems give them credit for being!

It is quite clear by now that we have no shortage of problems to attack. But let me aim more directly at a few that really bother me because, now that I am a Dean, I find that my notion that people are more important than anybody is considered quaint. I may be many different things to many different people, but my good friend Dr. Marilyn Schima will vouch for the fact that I sure am not quaint! I am absolutely convinced that if we really believe that people are more important than anybody, then the Systems must adjust to the invididuals. This is why I am battling and finding ways to outmaneuver the rules of

that famous game known as credentialing. It is crystal clear to me that, nationally, we must overcome the ravages of what I call a severe case of "infectious credentialitis!" This can be a near-fatal virus, and the continuing critical health manpower shortage is the clearest evidence of its insidious effects.

"Education" and "knowledge" are considered almost synonymous terms. By obvious implication, the words "Competence" and "skill" have become dirty words, despite the fact that we must sooner or later prove what we can do with what we know.

An unholy alliance has arisen among professional educators, national professional Societies, the regulatory mechanisms, and employers to agree to equate job eligibility almost exclusively with educational achievement. This means that a person needs a credential more to GET the job than to DO the job.

The credential represents an accumulation of academic credits. But this is nothing more than a variation of the numbers game. The entire educational system operates like a huge computer that continuously spews out millions of discrete bits and pieces of data. These pour into the student's memory bank. Periodically, the kid exchanges batches of these for credits. Cumulatively he exchanges the credits for pieces of paper. Get the right piece of paper - BINGO! Society automatically invests him with authority, responsibility, respectability, and, of course, job opportunity! An oversimplification, you say! Want to bet?

Currently, the academic credit is the only legal tender of "coin of the realm." Yet it is bogus currency. The academic credit has absolutely no educational meaning or value other than to record clockhours spent, usually sitting in a cloistered classroom or otherwise performing some cook-book routine laboratory exercises. As a Dean trying to be honest with my students, I am trying to figure out just why an average of 120 to 130 credits add up to a respectable bachelor's degree but 109 do not! Both the moron and the genius can accumulate credits. Even credit by examination possesses little meaning because usually only one's memory is tested. The fact that at the moment we have nothing better than the academic credit as a standard is NOT a good enough reason to settle for it without persistent struggle to evolve more meaningful techniques and procedures for determining how much of what kind of knowledge, competence, and skill a person has acquired.

We must honor the readily observable phenomenon in which different people learn different things for different reasons and at different rates. We can no longer afford the luxury of certifying people for work on the basis of the one traditional method, formal education. All of us know many individuals who are rough-cut diamonds mentally and who have gold in their fingers. To deny those people more responsible work, more satisfying work, and work demands that match their talents just because they have not accumulated the requisite amount of phony academic credit currency, is a travesty of justice.

We must also develop batteries of more effective paper-and-pencil tests to evaluate knowledge, more case study and related techniques to measure judgment and the decision-making skills, and more proficiency tests to measure manual skills. We must have educational equivalency tests for reasonably measurable amounts and kinds of on-the-job experiences.

We can develop these techniques only if employers use some hard-headed occupational, job, or task analysis techniques to determine how much of what kinds of functions, duties, responsibilities, and skills are required to perform competently in various categories of jobs. These job requirements should then be turned over as blueprints to the Educational Establishment to honor. I have the distinct impression that this procedure has been reversed. As a result, the gap between Academia and the World of Work remains wide, young people have been over-educated for their jobs, their levels of aspiration have been raised to unwarranted heights, and we find very high job attrition and turnover rates.

In a related area, the entire concept and procedure of educational articulation must become much more than a pious declaration of intent. Senior educational institutions look condescendingly down upon junior colleges. "You've located at every crossroads, you let anyone in through your doors, your courses aren't as rigorous as ours".....and so the snide remarks go. We can no longer afford this luxury. In some States, articulation is about to be legislated. Before this happens, I urge the junior and senior colleges to sit down together to relate their respective curriculums, in order to provide maximum advanced standing and the incentive of educational mobility. I am doing this now in my State of Illinois and it is working. It is not easy but it can be done. The hospitals must be in this, too. For example, I have a baccalaureate program in Physical Therapy. Some junior colleges have a Physical Therapy Assistant program. We are busy now putting the pieces together. Our combined faculties have approached two large hospitals with the following proposition: "We will undertake to train <u>your</u> physical therapy aides on <u>your</u> time and on <u>your</u> premises but <u>not with</u> your staff. You send <u>them back</u> to doing what you originally hired them for - taking care of sick people. We will train the physical therapy aides not for 10-14 weeks but for 20-26 weeks. Because we will know what we put into the program of instruction, we will identify some of the better students - those who learn well, who perform competently on the job, who are appropriately self-motivated - and we will give them some pot-sweetening advanced standing as a leg up toward the Physical Therapy Assistant program in the junior college if they want it." How to finance this? The hospital contracts for Manpower Development and Training Assistance funds and then subcontracts with us for the prorated costs of our faculty time. No one asked for a Federal feasibility grant. We hired no expensive Ph.D. to run the program. It is all voluntary. Yet, we have here a ladder of sorts - from the aide to the assistant to the full baccalaureate. All of these ingredients are available in every large population and in every metropolitan area. All that is required is an individual or an institution willing to stick its neck out far enough to say: "Let's try it."

There is no trick. It is relatively easy to put together the pieces of articulated curriculums. What is not easy is to get various educational and training institutions representing different levels, to sit down together at the same table at the same time to negotiate their differences. It is so very trite, yet so very true to say that "where there is a will there is a way".

Please do not be misled by the simplicity or directness of these observations. It will be quite a jolt to everyone involved to become party to any kind of plan that develops articulate curriculums, legitimate and practical equivalency tests, job or task analyses, and more realistic appraisals of what kind of education young people should be getting in this age. You will have your hands quite full. However, the patients will be better served, employers will get a more complete job description honored more competently, and the people being trained will be more able to reach their maximum level of talent and capabilities more readily if any of these activities are engaged in.

To put you more in the mood for change I wish to take off after a few more bastions of tradition. For example, I have a two-year, Upper Division, occupationally oriented, baccalaureate School of Related Health Sciences. I am expanding the currently long-operated one-year Medical Technology program in our base teaching hospital to a two-year program. The junior college Medical Laboratory Technician curriculum is also coming down the pike. Some of my hospital Medical Technologists are helping a few junior colleges in my area build their MLT programs, again for purposes of providing maximum advanced standing and a minimum loss in time and credit. Suppose that some of these MLTs find it necessary to go out into the working world for 2-3-4 years. Some may elect to return to complete their baccalaureate in this field. I will present them with a battery of proficiency tests and educational equivalency tests for their on-the-job experiences. I will throw in some detailed and sharp subjective evaluation interviews. It may well be that such a battery of tests discloses certain candidates as requiring only one academic year plus a summer session to qualify for the baccalaureate degree in Medical Technology. I will give it to them. Then a look of consternation will come over the faces of my traditional colleagues. "Al, how can you award your credential without having had the student in your clutches for at least 50% of the baccalaureate time?" And I will ask them what their question has to do with anything." (Parenthetically, at least two institutions are beginning three-year baccalaureate programs in September, 1972).

Recently I noted in a junior college catalog that its course in Freshman English Composition is creditable toward a baccalaureate degree, but that a course in Basic Communication Skills is not creditable. I will give it credit! I am the one to know why, too! I have been a technical writer and communicator for years, and it is my immodest privilege to have some of my writings in some anthologies sandwiched between the late Lord Bertrand Russell and Thomas Huxley. Good company, I would say! I then think of the national scandal in the teaching of the Mother Tongue. Freshman English Composition is a farce today! The kid who gets his first job in another city and writes home can hardly have his gibberish deciphered by his own mother! The chances are that most colleges schedule at least as many sections of remedial high school English as college-level English Composition. The young instructor can not recognize

a lucidly written sentence because she or he is the product of their generation. Furthermore, the instructor's recently completed doctoral dissertation had the title "Effects of Gastronomic Disorders on the Literary Output of Three Sixteenth Century French Novelists." Of course, the young student complains: "Gee, teacher, none of my other professors in my other courses downgrade me or give a damn about my lousy spelling or miserable punctuation." I certainly will give credit for a good course in Basic Communication Skills.

Let me cite a few other examples. Too many colleges still hold Physical Education as a baccalaureate requirement. This usually means field hockey for the girls, three intramural volleyball sessions per week, two trips to the pool per week, and the choice of learning archery or karate. Yet, when the Department of Defense sends out a new version of a national physical fitness test, each current school generation is found to be malnutritioned, flatfooted, and pot-bellied. What would be the loss if we dropped this requirement?

Too, we must have a social or behavioral science requirement for the baccalaureate. Every young person is curious to learn how people get to be alcoholics and addicts, what is back of the psychology of mob violence, and how the pollsters manipulate their statistical techniques. The young people are told that you learn all this in Social Psychology, the prerequisite for which is General Elementary Psychology. So the youngster enrolls in the elementary course and is faced with the neurons, the ganglia, the reflexes, and the history and development of the various schools of psychology, like Adlerian, Pavlovian, Watsonian, etc.

I realize that I have offered you some oversimplifications and caricatures. We all know that caricatures are distortions of the real thing. However, I submit that enough of this hanky-panky goes on to warrant immediate and thorough overhauling of today's liberal arts offerings. Such overhaul is being modestly undertaken, but by the very finest minds of the Twelfth Century!

I bring these examples to your attention because of the persistence in retaining for four undergraduate years a curriculum that long antedated our scientific and technological times. It is indeed ironic that the Trivium and Quadrivium - the original liberal arts - in Greco-Roman times were very much occupationally oriented as to the life styles of those days. The classes went to school, and they studied art, music, sculpture, the dance, etc. and practiced and developed them. All I want to do is make the liberal arts and general education more relevant to our times and our culture. I draw immediate howls of anguish from my old-time colleagues. Yet people like Ernest May, Dean of Harvard College, and Robben Flemming, President of the University of Michigan, only recently confessed that, somehow, we must develop a more judicious mix of the general and the technical at the undergraduate level. Not too many people are listening.

Of course, the national professional Societies conveniently go along with this. They buy the notion of every Mother and Dad that all the kids must have an education, and then look you in the eye and say that when the general and the technical are put together, there are not enough hours in the day. This automatically defers and shoves up into the graduate years the acquisition of knowledge and competence and skills that the student quickly realizes are of an elementary nature from an occupational point of view. So you hear young persons complaining that they have to defer marriage or the first child because they have to get that darn union card - and let us never forget that the masters degree commands a higher salary than the baccalaureate, and the baccalaureate more than the associate degree.

We simply must stop playing games with the most precious years of people's lives. We must swing the pendulum back from the almost exclusive stress on education toward greater respect for and demand for competence.

I repeat my apology for any disjointedness my comments may have presented. I did want to put the finger on a number of problems, to point out that all of us collaboratively can make some important changes, and that it is possible to change.

I will reserve for the later group discussion some experiences that I have had with such activities as sitting down at the negotiation table with junior colleges to work on articulation, the reactions of accrediting agencies to curricular changes, the more apparent than real limitations of some assumed licensing restrictions, and related matters.

I am impressed, really impressed, by the diversity of your backgrounds, interests, and work, as a collective body here. This augurs well, because I feel that your very presence here suggests a willingness to sit down and put all the necessary pieces together of some very reasonable and practical means of educating and training health workers for competent job performance.

The life of an educational maverick is hard and lonely. It gives me a real shot in the arm to know that groups like this exist. Many thanks for listening.

"State Requirements for Registration, Certification and Licensure of the Health Professions"

Elliott E. Leuallen, Sc.D.

I am delighted to have the opportunity to take part in this conference dealing with the significant and timely subject of health manpower and its effective utilization.

A great deal has been written and said during recent years about the need for change in just about every aspect of health care. Innovation and experimentation are being encouraged in training programs and in delivery systems.

New personnel are being proposed and limitations in practice being attached. No standard is immune to critical re-evaluation and no custom inviolable.

The demand is for relevance and for accountability, and the demand comes from consumer and provider alike.

All of this is good, and out of this is beginning to come a greater understanding of the issues and a sense of togetherness in working toward the common goal of generally available effective health care.

One can be especially optimistic where regional cooperation and coordination is being exercised, as here in the Genesee Region.

In this era of questioning and re-assessment it is right that one take a close look at the purpose and effect of present licensing requirements to see in what way they may need modification to meet the needs of modern practice.

Basic to the concept of licensure is the desire to protect the public. The holder of a license has met the standards prescribed by the state for his particular field of practice and there is a belief that only a person so qualified may with safety and reasonable competence engage in such practice. Unlicensed persons, therefore, are prohibited from performing the acts which come within the definition of the licensed practice. Medicine, dentistry and architecture are cases in point.

Closely related to licensure, under the New York State Education Law, is the act of certification. The most familiar of the professions subject to certification is public accountancy, where the individual who has met the standards prescribed in the statute is known as a certified public accountant or, more commonly, a CPA.

Certification, like licensure, is intended as a protection for the public or the employer. It affirms the attainment of a stated level of competence in a definite field. Unlike licensure, it does not confer an exclusive right to a field of practice, except in conjunction with the use of the title.

Elliott E. Leuallen, Sc.D., is Assistant Commissioner for Professional Education, New York State Education Department, Albany, New York.

The reasoning behind the choice of "licensure" or "certification," as new fields of practice have gained recognition under the law, may be of some academic interest but is immaterial to the present discussion. What is material is a brief reference to some of the real and potential handicaps to quality health care which could arise from the present licensing requirements.

One thinks of questions such as the following:

What kind of additional flexibility needs to be introduced into the licensing laws to get maximum value out of trained personnel? For example, to what extent should a "performance rating" be acceptable in lieu of prescribed education or examination standards?

How much of the confusion in health care provision arises from a lack of quality standards, such as certification, for the vast majority of identified titles of health workers?

To what extent is the criticism now directed at licensure actually a criticism of the system of independent practice? Or of institutional policies?

I believe that licensure and certification do have useful roles in the exercise of the state's responsibility for seeing that quality health care is accessible to all the people. I think that principal modifications in the procedural approach will come through the recognition of alternate routes of preparation by which an individual can achieve the level of knowledge and skill deserving of licensure or certification.

I would anticipate a greatly increased number of health occupations subject to certification and with authorization for a greater freedom of judgment and action for the certified practitioner.

It may be desirable to consider changes in the law so that it would be possible in institutional settings and in certain types of group practice to provide special authorization to individuals to practice within otherwise restricted fields under specified conditions.

Let us turn now to another issue associated with licensure. The time is long past when anyone would suggest that the passing of an examination and the obtaining of a license shortly after completion of a professional curriculum is any assurance of competence, even a few years later. Scarce indeed are the professional fields where continuous updating is not almost essential to reasonable performance.

For a variety of reasons it is popular today to point to the need for continuing education. I prefer to think of the need for continued competence with an understanding that the completion of an appropriate educational program is just one means of gaining this competence.

In any event, it appears likely that some kind of continuing education or other evidence of the maintenance of ability to perform effectively is going to be required of health practitioners as a condition of continuing in practice. In my opinion, any such requirement can be met only with the full cooperation of the profession itself working through the state professional society.

Every state society associated with the health professions in New York State has expressed its desire to provide not only cooperation but leadership in the development of the necessary approaches. Fortunately there is a great deal of experience to draw upon in many of these professions. The big question now has to do with the means of reaching all practitioners.

In a recent meeting called by the State Education Department the representatives of every health profession voted in favor of a resolution asking that the Department explore the feasibility of mandatory continuing education and develop with the aid of the professions such plans and recommendations as required.

In the implementation of any special condition for continued practice the act of registration would acquire added significance. Under New York law, a professional license is issued only once and the holder of the license is permitted to practice only if he is currently registered. Registration must be repeated every two years. At the present time this registration serves only statistical and fiscal needs.

If continuing education is to become mandatory it can be introduced into New York law simply by requiring that a licensee must give evidence of such preparation in order to be eligible for registration for practice in the state.

One does not deal very long with the subject of continuing education without running into the complication of specialization and the need to make this education and updating relevant to the individual's particular sphere of action.

Having accepted the principle that evidence of continued competence is desirable, and recognizing that specialization is the order of the day, one is forced to the conclusion that licensure should be comparably specialized. I think that we are approaching the appropriate time to consider the professional or scientific academic degree as satisfactory evidence of general competence, and to direct our licensing interests toward more fruitful efforts in specific specialty fields.

This is a subject on which diametrically opposed opinions are held. Some of my colleagues in the State Education Department and many of the men and women with whom I work in the various professions do not agree with me. They refer to the balance of power, or the checks and balances, between the schools and the boards of examiners. The board examinations, they say, provide a measure of the school's effectiveness and the quality of its product. The board, on the other hand, is forced to continuously change the subject matter of its examination to keep abreast of new materials in the curriculum and in practice. While this may be so for a profession of limited objectives and narrowly-restricted services, I believe that it is unrelated to "where the action is" in the majority of professions, where one sees increasingly the utilization of greater knowledge and expertise in only a restricted part of the professional field.

In a few professions, the mechanisms exist to permit specialty qualification. It remains for the state to endorse, support, and enforce as necessary, and to expand the concept more generally.

In summary, I would express the view that state licensure can provide the degree of flexibility and responsiveness that will encourage and support effective health care programs. Many new fields will be subject to certification and perhaps a few to licensure. Perhaps the best test of the effectiveness of the licensing provisions will be the extent to which they encourage, permit, or hinder improvements in service, such as the Adult Ambulatory Medical Care mentioned by Dr. Parker. There will be a state requirement for evidence of competence as a condition of continuing practice and the professions themselves will be the principal agents of supervision. Ways will be found to utilize more fully ability and training, however obtained.

"Carnegie Report -- Trends in Medical Education"

J. Lowell Orbison, M.D.

The report about which I have been asked to talk today is only a part of the final report to be issued in 1972 by the Carnegie Commission on Higher Education. This part is entitled "Higher Education and the Nation's Health: Policies for Medical and Dental Education". As the title indicates, its principal thrust is toward medical and dental education and is, in fact, much more toward medicine than toward dentistry. Thus, its value for much of what we are attempting to accomplish through the Alliance lies in its implications rather than in its explicit statements. The fact that the report puts little emphasis on allied health manpower is indicated in the section titled "Major Themes", in which it is stated "The report is primarily concerned with only .... the contributions of university health science centers (by this is meant Medical Schools and their related Hospitals and other Health Schools). Most health care personnel are trained outside these centers, and we recommend that the total spectrum of health care personnel be reviewed by a national health manpower commission.

As nearly as I can judge from reading the report of the Commission, new data has not been sought. Instead, the Commission has accepted concepts and views expressed from previous reports and from "experts" in the field. It has then turned to the medical schools to identify changes in education that are already being attempted or proposed. These two general sources of information are brought together into a report. Thus, the Carnegie Commission Report appears to be a report of current trends in medical education, not a proposal based on new data and pointing out new directions toward which medical education should go as a result of the analysis of that data. It may be that the view I have just expressed is not an accurate reflection of the way the report was put together, but the end result leaves me with that strong impression.

The report presents sixteen major themes. I have collected these into three principal categories: 1) the current needs, 2) the proposed remedies, and 3) the proposed financing.

I. The Needs:
   It is proposed that because our national health is not better than that of other nations as measured by infant mortality and average life expectancy and because there is a greater demand for medical care than is being fulfilled, that there is a serious shortage of all health manpower. Special emphasis is placed in the report on the shortage of physicians and, to a lesser extent, on the shortage of dentists. Shortage of other types of manpower is noted but not pursued, except for a special recommendation for physician

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J. Lowell Orbison, M.D., is Dean of the University of Rochester School of Medicine and Dentistry.

assistants. Since the report limits itself to those personnel trained in institutions of higher education and principally those beyond the baccalaureate degree, its concern with only a small segment of the total health manpower need is justified. It is stressed particularly that the geographic distribution of medical personnel is uneven and that there is a great need for correcting this deficiency. The need for planning and reorganization of the delivery of health care, for better facilities and for better financing of health care are all noted but are considered to be principally a responsibility of public agencies, not of institutions of higher education.

2. The Remedies:
It is proposed that to meet the indentified needs there must be more and better health manpower. Specifically, it is recommended that medical centers increase within the next decade their training of doctors by 50% and of dentists by 20%. It is recommended that the present ratio of allied health personnel to physicians of ten to one should rise substantially and especially through the increased training of physician assistants. It is recognized that other allied health personnel also will need to be trained in greater numbers, largely through the increased role of colleges and community colleges in this educational effort. It is recommended that new medical schools be formed and that these not follow the "Flexner Model", which is viewed as emphasizing biological research. Instead, they should follow one of two new models: either the health care delivery model or the integrated science model. It is to be noted that these two models are being tried already.

In the health care delivery model the medical school carries on the training of physicians but orients itself principally to external service through research in health care delivery and through working with other institutions in the training of allied health personnel and with emphasis on continuing education. In the integrated science model most or all of the basic science instruction is carried on within the parent university. Thus, the medical school becomes essentially a teaching hospital, much like the English System. It is proposed that the nation will be better served as many schools move away from the Flexner model. "A diversity of models and mixtures of models are now desirable." Thus, it is proposed that "pace-setter schools" are moving toward health care delivery or the integration of science or both. "The nation has a sufficiency of the pure research model type of school."

It is proposed that health science centers be distributed in a more effective geographic manner. These centers are now commonly called medical centers and include medical schools, other health related schools, and their associated hospitals. Nine new centers are recommended in specific locations to give an adequate regional coverage. By attracting medical students to these new centers, it is assumed that many will remain in the region where they are trained and thus provide the needed medical manpower in regions now deficient in numbers of physicians.

It is further proposed that area health education centers be founded to serve localities which do not have health science centers and do not have sufficient population to support such centers. These would be administered by the nearest health science center and be located in a community hospital. They would train medical and dental students and medical residents on a rotational basis in clinical medicine and dentistry, carry on continuing education for doctors and dentists and other health care personnel, help in the training of allied health personnel, and improve the health care in the area. These health education centers would have the advantage of providing a focus of medical care and medical education where a full scale health science center would not be warranted. Though our experience at Rochester indicates that there are many problems to be solved if such a center is located at a considerable distance from the administering health science center, the idea is worthy of further testing and experimentation.

3. Financing:
Financing is proposed to come in greater proportion from the federal government, though states are urged to extend their support to private medical and dental schools. Worthy of special note is the proposal that both the federal government and the state government seek "reforms and improvements" as they expend their funds. There is no definition of these reforms and improvements; it is reasonable to assume that they are those proposed by the Commission.

As might be expected, there is considerable emphasis placed on ways in which the costs of medical education can be reduced. It is proposed that the time between the baccalaureate and the M.D. degree be reduced from four to three years. It is also proposed that the time to fulfill post graduate medical residency requirements be reduced from four to three years; that the ratio of faculty to students should be reduced; that the minimum size of the medical school class should be increased to 100; that two classes of medical students should be accepted each year; and that teaching should continue during the summer period.

As further methods for cutting costs it is proposed that the number of allied health personnel be greatly increased, and that research expenditures be held steady as a percentage of the gross national product.

These, then, are the recommendations of The Carnegie Report and, in fact, are the trends today in medical education. That there is a great demand for increased medical care, that there is poor geographic distribution of health personnel, that there is need for health science centers to focus investigative competence on the problems of health care delivery, and that there is need for more and better continuing education, there is, in my mind, no question. Further, I would agree that the proposals made by the Carnegie Commission in regard to these points are valid and valuable. It seems to be, however, that there are weaknesses in the report, and I should like to comment briefly on these.

If we look at the part of the report that speaks to the need for increase in medical manpower, it is stated that there is need to increase the quantity and quality, and I emphasize the word quality, of medical personnel. In the cost-cutting part of the report it is proposed that in medical education the time for education be reduced, the ratio of faculty to students be decreased, the minimum size of medical school classes be increased, and that two classes of medical students be accepted each year. That these cost-cutting recommendations will increase quantity of physicians there is no doubt; that they will increase the quality of these physicians there is in my mind much doubt.

The medical school model of the past sixty years, the so-called "Flexner model", is admitted in the report to have made great strides in the quality of research and the quality of individual practitioners. It is further stated that some of these should be retained. Yet I am left with the impression that such activities are no longer viewed as an important priority, at least I do not find it specifically stated. This may be only a relative effect because of the strength of the emphasis on the other models proposed. But I want to make it clear that excellence in education and dedication to research are absolutely essential to progress. Without them the future holds no promise of improvement. Both must remain a high priority. Let me point out as an example that the reason you see no children crippled by poliomyelitis today is because of research, not because of the improvement of care.

The report implies, at least, that more physicians are needed if the nation's health is to become the best in the world. I would like to examine with you some data relating the level of health in industrialized countries to the numbers of physicians. If we use the same criteria for health as is used in the Carnegie Report, infant mortality and life expectancy, we find that Sweden and the Netherlands have the best health among the industrialized nations. These two countries have one physician for every 850 of population. The United States, which is about in the middle of the list, has one physician for only 650 of population; whereas Italy, at the bottom of the list, has one physician for only 570 of population; and Russia, next to the bottom, has one physician for only 450 of population. Thus, these data show an inverse ratio between the number of physicians and the national level of health.

From this data one might propose by extrapolation that the maximum in national health would occur in that country having no physicians. Because of my personal bias as a physician I would be unwilling, as I am sure you can understand, to go to such an extreme in interpreting the data. But seriously, the data does clearly indicate that there are very important factors, that influence the health of a people, undoubtedly much more important factors than the number of physicians. We need much more careful identification of what those factors are. Otherwise, we are in danger of finding a decade or so hence that we have spent large sums to educate more physicians and have not attained the improvement in the national health which we are seeking.

As I have indicated, I do not find the data upon which some parts of the report are based convincing nor the analyses carefully reasoned. I view the report as reflecting largely the present demand of society for more and better medical care at less cost. These are in themselves desirable goals and medicine should respond to society's needs. But this response should be, as much as possible, from data and from carefully reasoned judgement.

The importance of this document must not be underestimated, for there is clear evidence that it is having an impact in many circles, including the political. Already, much that is presented in the Carnegie Report has been incorporated into the President's health message.

As a citizen, a physician, and an educator, it is my personal and sincere hope the medical schools and the whole health care organization will have the opportunity to respond to society's needs without losing the gains that have already been made or endangering the potential future gains to be expected from our present strengths. Without the continued support of research all progress stops. Diversion of resources from education to health care will result in inadequately trained physicians and eventually will harm the very medical care we are attempting to improve. There must be a balance between research, education and health care, or our progress is jeopardized.

"Allied Health Education at the Community College Level"

Marilyn Schima, Ph.D.

Community colleges have a central role in designing for the changes so vital to the development of meaningful and relevant education programs for training health manpower.

This vital role of the community college as a change agent and as an architect of educational programs evolves quite naturally from the community college and from the transitional period we find ourselves in, i.e., of adjusting our systems and practices to our technological sophistication and capability.

Crawford states that the purpose of the community college is to provide "education consistent with the purpose of the individual and society necessary to the development of new technologies."

Society and its institutions have finally recognized health care as a right for all rather than a privilege for the privileged few.

To make this right a reality an explosion is occurring in the health field - which is affecting every phase of our industry, i.e., providing approaches to the delivery of health care as well as health manpower training programs.

The health industry's annual expenses of approximately 60 billion dollars represent 6% Gross National Product. We are fast becoming one of the country's most powerful industries. Within this industry four million people are working in health careers in the United States today, making hospitals one of the largest employers in the country. The need for new manpower grows with the industry and much of the training is falling to community colleges. Since the greatest shortages are found at the technical level of education and performance.

The growth of the community college has occurred at a rapid pace across the nation. There are currently 1091 community colleges with a projected increase of 50 a year for a least the next 5 years or 500 more community colleges by 1980. Out of the 1091 at least 850 community colleges have one or more allied health programs.

Out of the 58 community colleges in New York State, 52 have one or more health programs. It is interesting to note that New York did much of the pioneering work in the development of health programs in community colleges. Hostos Community College is the only community college and is the newest community college in CUNY or SUNY that specializes in

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Marilyn Schima, Ph.D., is Associate Dean of Health Sciences, Hostos Community College, Bronx, New York.

training for health occupations. Hostos is an experimental school whose objective is to study and work towards solving many of the problems surrounding the training and education of health manpower.

Hostos Community College - the eighth community college in the City University of New York - located in the South Bronx, opened September, 1970, in a predominantly Puerto Rican neighborhood. The great majority of its 590 students are Puerto Ricans and Blacks. Hostos is named for the revolutionary Puerto Rican educator, Eugenio Maria de Hostos, thus making it the first college in the continental United States to be named for a Puerto Rican.

Hostos is an experimental college from two vantage points:
1) its approach to instructional methodology and 2) its design of health manpower programs.

First - our approach to instructional methodology - what does it do?
It offers a unique educational approach that is designed to provide individualized instruction for its students based on the development of performance objectives.

Subjects are organized into manageable units of instruction, and students proceed at their own pace to completion. When a student demonstrates that he has acquired the skills and knowledge that make up the objectives of a unit of instruction, he receives the appropriate credit, and begins another instructional unit. The traditional format of a fifteen week course, with unit and daily lesson plans, gives way to six-eight week modules, milestones, and behavioral objectives.

Modules are units of instruction, which take the place of semesters or semester-length courses. Their format, or structure, forces analytical teasing out of specific knowledges expected, and focuses on six major design components:

1. Entry level knowledge, skills and behaviors of students as they enter the module.
2. The behavioral objectives that the instructor has established as the goal.
3. The content necessary to reach the objective.
4. The teaching strategy or methodology that is most likely to succeed in getting the content across to the student in order to achieve the objectives.
5. The criteria test which will tell you if you achieved the objective and at what level of proficiency you reached the objective.
6. Evaluation of the success of the preceding five elements, and readjustment where necessary.

What are the advantages of the instructional systems approach?
<u>It makes possible</u>:
The development of a learnerorienteđ system versus subject/teacher oriented system.
Flexible scheduling whereby students proceed at their own pace through the objectives of the program and their individual educational prescription providing for a continuous educational cycle.

More flexible enrollment policies since a student moves along the educational continuum at his own pace rather than in static groups.
The feasibility of giving credit for living, learning and work experiences.
The banking of credits - credits learned outside the traditional route.
It also changes the teacher role. The teacher has the opportunity for maximizing her talents as a learning strategist versus being a dispenser of information.
This methodology allows for the maximum use of a variety of educational media, and provides the opportunity for looking at the development of and possible use of stimulation techniques in manpower training.
Increase the transferability and mobility of students in the health occupations by identifying the commonalities between occupations through the core concept thereby increasing horizontal as well as vertical mobility.
It makes feasible the establishment of satellite educational centers at health agencies.
It puts into focus the critical need for the community college and health agencies to work together.
Allowing for educational institutions to constructively challenge restrictive professional accrediting groups, who frequently measure learning by investment of time and money versus quality of the educational experience.

The curriculum of Hostos represents an attempt to blend education with training at the technical level so that its students will have opportunities to grow in terms of responsible behavior as well as in more efficient performance on the job.

Here we use Cotton's distinction as a frame of reference. Training refers to a process whereby the individual is helped to become effective in performing some task. The task may be relatively simple, like learning to type, or extremely complex as in learning to transplant a human heart. In either case, the individual learns to make the appropriate responses, necessary to the efficient performance of his task. Training, then, involves a distinctive type of learning, learning to be more effective and productive.

Education, on the other hand, involves a completely different kind of learning, learning to be more human. The emphasis is on personal growth, helping the individual realize his latent human potentialities; thus, the aim of education is human excellence .... Education must direct its attention to the intellectual, moral, aesthetic, and spiritual dimensions of the human condition; or, in Ralph Barton Perry's descriptive phrase, to "the Man in Men."

Training, then, is designed to make us more efficient objects, while education is concerned with helping us become more responsible persons.

Hostos is now focusing on developing two-year programs; however, we will be working with health agencies in identifying the continuum of tasks and knowledge in a profession, so that we can more rationally identify the appropriate institution to train the various levels of personnel needed.

What are the Guidelines we use in developing health manpower programs - essentially, recognition of the times, the trends, the needs.

Guidelines:

Includes recognition for assisting in the transition of hospital-based training programs to educational institutions and the establishment of joint programs where appropriate.

The impact of technology on the delivery system and training.

The emergence of new job categories - Technology has created an addition and shifting of tasks with the resulting need to restructure levels of responsibilities within a career.

Role of specialization within professions.

The need to design programs and curriculum which are relevent to the employers needs and delivery system.

The need to articulate with senior colleges as well as with other educational institutions - developing an educational continuum.

The need to structure curriculum on an understanding of the tasks to be done; i.e., the need for job task analysis and feasibility studies and looking at the division of tasks in professions according to levels of complexity.

The need to upgrade the current pool of health employees in order to provide them with credentials or credits that are negotiable and thereby provide them with mobility.

The need to work together toward an educational and employment continuum thereby minimizing dead-end jobs and dead-end or terminal education.

The development of satellite educational centers - hooked into college. This can result in a design which can provide for entry level education (upgrading) - continuing education and credit bearing courses, at health agencies. (Banking of credits).

The development of technical seminars - continuing education.

The development of programs with the participation of various community members, including students, as well as professionals (Active Advisory Boards).

The need to train together in order to work together - (Team membership).

The use of equivalency and proficiency exams.

The development of a truly open door school opened 24 hours a day for residents of all ages.

"Changes and Challenges"

The 1970's mark a time of transition in the health fields. A time for innovative development of health care delivery systems. A time for local communities, medical professions, and all personnel in the allied health occupations to work closely together. And a time for educational institutions such as Hostos Community College to assist in a new, nationwide endeavor to provide effective health care as a RIGHT for every citizen.

Technological advances are helping us at Hostos to translate these dreams into realities. Using the systems approach for program building, we are designing separate learning activities for each student; using mediated instruction, we are planning flexible scheduling to accommodate individual needs, and using the computer, we are developing a

system of banking credits so that any student may move in and out of college for the rest of his life, building each time upon his previous school and job experiences.

To serve the South Bronx Community we are working closely with existing educational and hospital facilities, seeking to provide the finest health care for South Bronx Community we are working closely with existing educational and hospital facilities, seeking to provide the finest health care for South Bronx residents that is possible. We are listening to their questions and concerns, selecting careers to match their health manpower needs and capabilities, and we will adjust our educational program when new developments indicate the need for change, keeping the community informed at all times of such change.

We believe that Health Sciences at Hostos can provide a new model for health manpower training programs. Never was the challenge for better programs in health careers so great - never were the possibilities for meeting this challenge so exciting.

Recommendations

Health Manpower Conference
Group Discussion Recommendations
March 26, 1971

Group A - Measuring Demands for Health Manpower

General consideration: manpower inventories and projections have proven vastly unsatisfactory both for assessing needs and meeting the real requirements. Ideally, a moratorium should be declared on all such studies until an adequately sophisticated data system relating the changing health care system to manpower can be developed. Realistically, the Alliance must offer leadership in education of manpower now, and we recommend that it:

1. Use inventories developed in on-going national, state and regional studies to develop rough estimates of manpower requirements.

2. Build adaptive ability of health manpower into the educational structure by fostering basic preparation of health personnel in core programs with capability for learning specialties and shifting fields.

3. Contribute to long range plans for assessing manpower requirements by:
   a. Setting health care goals through comprehensive health planning agencies involving citizens as well as health professionals.
   b. Defining needs for personnel in terms of goals.
   c. Relating numbers of persons educated to needs for personnel.
   d. Reforming health curriculums in terms of goals and personnel needs.

4. Consider ways of relating its efforts to the medical curriculum in light of the growing emphasis in the health care system on comprehensive care rather than treatment of disease.

Group B1 - Health Manpower: Expanded Roles and New Careers

There is considerable discrepancy between the expressed need for allied health workers and the number of established programs for training of these personnel. This discrepancy has been attributed to lack of "start up" and "sustaining" funds for training purposes, but we must consider the possibility that it stems from a lack of pressure from the providers and recipients of primary health care. It is with this latter reason in mind that we make our first two recommendations to the GREA.

1. Encourage the establishment of new and the expansion of existing training programs for the training of traditional and innovative types of allied health workers in our region. This can best be accomplished through direct and indirect support for funding

mechanisms of public and private origin and through educational programs aimed at practicing physicians to delineate the worth of utilization of allied health workers to improve the quantity and quality of primary health care. This education could be accomplished through physician-nurse-educator-planner conferences at administrative and provider levels. There is clearly a lack of communication between the professions regarding this vital issue. In addition to efforts to stimulate physicians to support the training and utilization of allied health workers it would be advantageous to stimulate similar support from the consumers of health care. The group did not feel that this was a direct function of GREA, but concluded that the Genesee Region Health Planning Council and the Rochester Regional Medical Program might conduct regional workshops involving true representatives of consumer groups, primarily to learn of their concerns regarding health care and secondarily to provide the impetus and perhaps the direction for their involvement in activities directly supportive of allied health training. The use of the news media would be a helpful adjunct to this end.

2. Recognizing that a substantial portion of providers of primary care may not with good reason alter their current practice methods, the GREA should study and support methods to provide collaborative programs for educating allied health professionals (physicians, nurses, economists, sociologists, social workers, psychologists, etc.) in core curricula so that each would have a better understanding through communication early and throughout their training of the other disciplines. This hopefully would lead to appreciation of the knowledge, skills and attitudes of each profession and result in greater collegial and collaborative relationships in the provision of health care upon completion of training.

3. The GREA should work to eliminate barriers of admission to the health career training system. These barriers are largely economic and educational effectively blocking entry for many interested, capable individuals. An open curriculum should be established whereever possible to allow entry at various levels and allow progression on the basis of demonstrated knowledge and skills rather than being dependent upon attained educational credentials.

4. When sufficient numbers of allied health workers have been trained and are utilized consideration should be given to a program for education of the public to the value of allied health workers in providing health care. Such public education might well be conducted by a community health worker recruited from the population served and trained in the intricacies of the health care system and methods of educating the public in how best to understand and utilize it.

Group B2 - Health Manpower: Expanded Roles and New Careers

Recommendations:
That task forces be established to
1. Survey and tabulate list of current allied health education programs at all levels.
2. Define recognized health needs of region.
3. Project emerging health needs and determine personnel required to meet needs (based on job analysis).
4. Seek means to secure legal protection for experimenting with new ways of meeting health care.

Discussed needs that require attention:
1. Physician assistants, particularly in small hospitals in region.
2. Nurse practitioners in Pediatrics and Geriatrics.
3. Family health assistant to work closely with families.
4. Whether or not public believes its needs are being met. A survey was suggested. It was recognized that there is consumer representation on the Genesee Region Health Planning Council, perhaps it could assess needs through its non-provider representatives.

Group C - Manpower for Ambulatory Care

It was recommended that the Alliance:
1. Use neighborhood residents as auxiliary manpower. Allied health workers - with ambulatory care setting.

2. Recruit youth of area toward health careers. Consider how grants or loans for education might be repaid by work contributed by students in an Ambulatory Health Care Center.

3. Use of physician assistant in Ambulatory Health Care Units depending on type of care to be provided.
   Type "A" (24 months)
   Medex (15 months)
   Nurse Practitioner

4. Develop innovative ways of training people in the area who may have been involved with some of the problems, such as Alcoholism, Drug Addiction, etc.

5. Consider the development of a Centralized Training Center - use training programs already in existence - avoid duplication of educational programs. No new programs should be developed until all existing facilities are fully used.

6. Recommend that Nurse Practitioner skills should be a part of Baccalaureate programs.

7. Consider use of Nurse-Midwife.

Group D - The Employer and Manpower Development

It is recommended that the Alliance:

1. Plan and project needs of jobs and possibly tie in with the Comprehensive Health Planning Agency's review and planning activities.

2. Investigate need for evaluation of people after they are on the job - they should also evaluate program and faculty.

3. Consider releasing closed end of programs - especially promoting improved attitudes.

4. Encourage the development of cooperative inservice programs.

5. Foster no expectations for jobs given by educators which are not realistic - eg. - weekend work, evening shifts, etc.

6. Develop geographical manpower need survey frequently with a system for data collection and rapid feedback in time to direct students in core program to another area where jobs would be more available.

7. Consider development of a Clearing House for experience available in various institutions - possibly providing a facility for experience.

8. Be sensitive to the needs of small institutions. It was felt that possibly the department of the hospital having the largest part of the educational budget was "most represented" in the Alliance; however, other departments should not be overlooked.

Group E - Health Manpower in General

Phases of activity for the Alliance (not necessarily temporal, some parts should be concurrent) should be instituted:

1. Information and Designation Phase - especially on:
   a. Training projects here and elsewhere with frequent up dating.
   b. Existing job needs in this region.
   c. Legal aspects, especially professional accountability, here and elsewhere. Analysis of legislation, both existing and needed.
   d. Use of corpsmen
      Great variability in training and ability.
      Description of types and levels.
      Economic expectations.
      Problem of current "band-wagon" effect and naivete (public and profession) which is misleading of discharged corpsman.
   e. Levels of M.D. expanders, etc. - in use and needed.

2. Study and Program Evaluation Phase
   Subcontracting and stimulating experiments and companions on training and use of systems and methods (i.e., of different types and level of professionals and of their use).

3. Action Phase
   a. Recommendations - "Final" (constant up-dating) on:
      Levels of professionals to be developed.
      Accountability of different types.
      Standardized training programs.
      Candidate description ("characteristics" rather than simply "qualifications").
      Upward mobility mechanisms (core, branching, teams, etc.).
      Special problem areas - care of elderly, senile, chronic illness, etc.
   b. Implementation and Facilitation
      Planning - regional.
      Program facilitation.
      Financing mechanism facilitation.
      Stimulation of inter-institute interaction, programs, and cooperation.

Group Discussion Recommendations
April 29, 1971

Group A - Proficiency and Equivalency Determination for Admission to Training and for Employment

1. The Alliance should analyze the content of health education programs for the purpose of breaking down such content into smaller components which can then be easily subjected to assessment via proficiency examinations.

2. The individual educational institutions and employers should recognize life experience competencies relative to the health occupations in a tangible way, i.e., advanced placement, admission, etc.

3. The Alliance should determine regional standards as a baseline for achieving common recognition of the various health occupations, i.e., health aide, community mental health worker.

4. The Alliance should help to seek financial assistance for institutions willing to provide educational programs which are designed to permit multi-entry and multi-exit levels.

Group B1 - Experimental Approaches to Training Health Personnel

The Alliance should investigate the use of team training of health personnel since the health team is emphasized in the service system. Consortium of colleges, sharing of staff, and the use of the core concept with common course offerings are areas to be explored further, with emphasis on the behavioral objectives in each of the occupations. A program is then an educational prescription of modules derived from a common base.

The following are observations worth noting:

1. Students are often misplaced because of early decision and lack of motivation - they fail to achieve their career goals and often drop out.

2. Common core programs are favored to permit student to choose from among several health professions after an exposure to all of them.

3. The search for relevancy should not discount the need for a comprehensive education. Programs should have a balance of practice (training) and theory (education).

4. The people are becoming increasingly dissatisfied with educational traditions which have built-in limitations. This is also true of potential leaders who govern decision-making in institutions. This points out the need to experiment with new forms of educating and training health personnel.

5. Systems of delivery (education, training, practice) are not coordinated. There is little progression between professional levels for upward mobility. A recommendation for increased use of career ladders with carefully defined levels is necessary.

6. The Alliance and other organizations concerned with health careers should bring together the educational institutions and the resource institutions which deliver health care for more effective distribution and use of personnel resources.

Group B2 - Experimental Approaches to Training Health Personnel

The general interests stated by individuals in the group centered around new training approaches considering expanded roles, limited funds, particular interests of certain groups. Analyses of needs, professional practice, health services, and educational programs are needed to determine changes. Recommendations were as follows:

1. Promote career ladders by overcoming legal aspects in institutions and by defining each level of the ladder. We need to look more towards the people to do the job rather than labels for the jobs.

2. Meet long and short term goals by analyzing the system: legal, institutional and ideological with the input of lay and educational resources.

3. Expand nursing roles to more advanced clinical responsibility.

4. Improved educational methods should be emphasized - closed circuit T.V. - use of teaching where needed and dialogue with other institutions to see common need rather than individual experimentation in directions. Other experimental training methods should be emphasized.

5. Encourage the Alliance to serve as a source for transmission of information on funding for experimental programs available from the government and foundations applicable to the institutions in the region.

6. Demonstrate care in student selection and guidance to educational programs. It is obvious that many programs lack basic education which limit professional and further educational opportunities. This points out a need for a general remedial program in the area.

7. Encourage translation of ideas into experimental activities (pilot programs and demonstrations) with retrospective evaluation and development.

Group C - Occupational Mobility: Barriers and Opportunities

This group centered discussions around the area of training of the paraprofessional, and it was recognized that service-needs require definition in order to develop training programs. It is important to determine where and what institution should do the training for professions. It was emphasized that the world of work, not the educational institutions, must define job requirements. Hospitals should dictate their employment needs and requirements of their own employees. The basic recommendations were:

1. Develop articulation with physicians and state professional organizations (i.e., nursing groups, laboratory groups) to define and accept lower level personnel assuming broader responsibility in the health care delivery systems.

2. Enhance coordination between AAS and BS programs so that students could move easily from one educational level to another without undue inconvenience and loss of credits. Use of evaluative examinations could be helpful in terms of assessing a student's qualifications.

3. Encourage development of new careers, taking into account federal and state legislation. Involve the poor and disadvantaged in programs which offer choices of entry level positions.

4. Encourage the employing agencies to describe what the job tasks are so that the educational programs can design curriculum accordingly.

5. Become familiar with the federal and state sources of support for particular careers. Also be aware of licensure restrictions and barriers which are often more imagined than real.

6. Build into existing and planned programs evaluative mechanisms based on job analysis of the tasks actually being performed.

Group D - New Training Programs at the Vocational Level

The Alliance should endeavor to coordinate training at various levels. There are over 262 health occupations identified, all with differing requirements and concentrations. It was recognized that vocational programs should not train for highly specific skills at early ages since mobility will be restricted. Emphasis on purely general education and no skills is also not a solution to meet the needs of students seeking employment in technical areas.

Recommendations:

1. Develop individualized programming opportunities beginning with employable skills and adding on courses in terms of individual needs. Modular training could be used to permit flexibility of vocational choices.

2. Sponsor orientation programs to acquaint individuals with employable and saleable skills.

3. Encourage broad care programs, engineering and clustering of courses to allow expansion of closed-end skills. Examine salary increments and numbers of personnel going into different levels as contrasted to numbers of people entering highly specific positions.

4. Disseminate information about employee work habits, punctuality, attendance, skills, etc., so that the job conditions with motivating factors can be properly understood in the employment situation. The interest, ability and post training of individuals should be recognized in designing work-study programs.

5. Develop coordination and cooperation in existing training programs sponsored at the vocational and technical levels. Schedule use of practical experience sites more uniformly.

Group E - Continuing Education for Health Manpower

This group concentrated on various ways to meet the needs for continuing education in the health professions. For example, the Regional Medical Program has taken a centralized continuing education approach and has tried to stimulate active health personnel to advance within their own professions. It was noted that there is a tendency to isolate health related fields and to become unaware of what is happening in the non-health fields. The dilemma of who should bear the educational costs of employees was brought up by group members. It was felt that the employer and the individual should in some way share the financial responsibility with an assurance that up-to-date service will be delivered from a current body of knowledge.

It is necessary to create an environment which will accept the philosophy of continuing education rather than to promote refresher courses in

specific professions without a liberal education foundation. Flexibility in designing programs is essential so that changes in career choice can be permitted. Personnel can be motivated to learn content and techniques in new and related health fields if the topics are presented in provocative ways using a maximum of individual participation.

In instances where employees are chosen to attend special institutes or educational conferences, they should return something (information, increased knowledge, better performance, etc.) back to the institution. Continuing education should be a multi-disciplinary affair so that a variety of contributions can be brought to bear on common problems.

Specific recommendations are to:

1. Promote a regional organizational framework to facilitate continuing education through central programming, financing, faculty and facility sharing. It would assure that the proper quantity and quality of continuing education are delivered.

2. Encourage interdisciplinary inservice education within agencies or an interagency basis to be woven around problems solving situations or common concerns.

3. Promote evaluation of individuals following their involvements in educational programs in terms of improvements in care so that teaching methods can be altered accordingly.

4. Emphasize prevention of illness through health professionals engaging as role models in teaching and practice. Much needs to be corrected in living habits before actual prevention can be accomplished.

Faculty and
Planning
Committee

PLANNING COMMITTEE

Charles H. Russell, Ph.D.
Project Director
Community Planning Committee
for Nursing Education

John Stevens
Administrator
Highland Hospital

Francena L. Miller, Ph.D.
Research Associate
Rochester Institute of
Technology

Harold Rakov, Ph.D.
Coordinator
Off Campus Programs
and Centers
State University of
New York at Brockport

Edith Olson
Nursing Coordinator
Rochester Regional
Medical Program
Associate Professor
University of Rochester
Department of Nursing

LeRoy Deabler
Planning Associate
Genesee Region
Health Planning Council

F A C U L T Y

Virginia Barker, Ed.D.
Dean
Department of Nursing
Alfred University

Thomas Cardillo, M.D.
Associate Professor
of Medicine
University of Rochester
School of Medicine & Dentistry

Evan Charney, M.D.
Associate Professor
of Pediatrics
University of Rochester
School of Medicine & Dentistry

Eugene F. Conant
Assistant Superintendent
for Administration
Rochester City School
District

George W. Couture
Director
Charles G. May Occupational
Center Mt. Morris, New York

LeRoy Deabler
Planning Associate
GRHPC

Darwin Farber
Executive Director
Neighborhood Health Centers
of Monroe County, Inc.

Harold E. Farneth, Ph.D.
Dean of Curriculum and
Instruction
Monroe Community College

Alan L. Heyneman
Director of Personnel
University of Rochester

Mary Hill, R.N., Ph.D.
Nurse Consultant
Division of Nursing
U.S. Public Health Service
Bethesda, Maryland

Robert Hoekelman, M.D.
Assistant Professor of
Pediatrics & Health Services
University of Rochester
Medical Center

Edgar Hollwedel
Director
Vocational Training
Rochester City School District

Joseph Kadish, Ed.D.
Acting Chief
Educational Program
Development Branch
National Institute of Health

Marguerite Koderl
Director of Nursing
Rochester General Hospital

Elliott E. Leuallen, Sc.D.
Assistant Commissioner
for Professional Education
New York State Education Dept.

Joan Lynaugh, R.N.
Assistant Professor
of Nursing
Department of Nursing
University of Rochester
Medical Center

Jünet Mance
Assistant Director
of Nursing Service
Strong Memorial Hospital

Helen McNerney, R.N.
Assistant Professor
of Nursing
University of Rochester

Lonnie Mitchell, Ph.D.
Professor of Psychology
University of Rochester

Edward Nash
Associate Professor
Chairman Bio Chemistry
Department
Corning Community College

Ruth Newell
Personnel Consultant
Rochester Regional
Hospital Council

Edith Olson
Associate Professor
University of Rochester
Department of Nursing

J. Lowell Orbison, M.D.
Dean,
University of Rochester
School of Medicine & Dentistry

Darwin Palmiere
Dean Designate of the
Faculty of Human Services
State University of New York
at Brockport

Ralph Parker, Jr., M.D.
Director
Rochester Regicnal Medical
Program

Marjorie Pfaudler, R.N.
Associate Professor of Nursing
University of Rochester

Margaret Rathbun, M.D.
Deputy Health Director
Monroe County Health Department

Charles H. Russell, Ph.D.
Project Director
Community Planning Committee
Nursing Education

Marilyn Schima, Ph.D.
Associate Dean
Health Sciences
Hostos Community College

Sister Mary René
Administrator
St. James Mercy Hospital

Sister Marie Michael
Director of Nursing Services
St. Joseph's Hospital

Mary Wemett
Associate Professor
Nursing Department
University of Rochester

Walter Wenkert
Director
Genesee Region
Health Planning Council

Conference Registrants

CONFERENCE REGISTRANTS

LIST OF ATTENDANCE - 1971

* * *

Miss Alice Abbott
Supervising Public Health Nurse
Monroe County Health Department

Miss Barbara Adams
Graduate Student
University of Rochester

Mr. R. J. Agnese
Prof. Med. Tech-Chairman
Monroe Community College

Miss Cecilia M. Albano
Nursing Services Consultant
N.Y.S. Dept. of Health

Mr. Robert A. Allen, Jr.
Director of Academic Advising
University School, Univ. of Roch.

Miss Felice Armignacco
Sup. Public Health Nurse
Monroe County Health Dept.

Miss Marie Ashford
Social Service Aide
Family Children Center

Mr. Gyel Ateegy
Surgery Dept.
Strong Memorial Hospital

Miss Lois A. Ballard
Head - Hematology
University of Rochester

Mrs. Gilda Barone
Ass't. Dir. of Nursing
Church Home

Miss Violet Bean
Health Education Dept.
Monroe County Health Dept.

Miss Diane Bennett
Asst. Instructor
Univ. of Rochester

Jona Ben-Zvi
Health Planning Intern
N.Y.S. Health Plng. Comm.

Mrs. Marie Bernhardi
Administrative Asst.
Monroe County Medical Soc.

James Block, M.D.
Resident Physician
The Genesee Hospital

Miss Margaret Boies
Instructor
Highland Hosp

Robert T. Boone
Optometrist
Rochester Optometric Soc.

Mrs. Gaynelle T. Bowen
Asst. Dir. - Nrsg. Serv.
Arnot-Ogden Mem. Hosp.

Mrs. Mary A. Boyd
Nursing Dir.
Rochester Methodist Home

Miss Margaret M. Brady
Chairman, Nsg. Dept.
Comm. College Finger Lakes

Virginia M. Brantl, R.N. Ph.D.
Prof. & Assoc. Chairman
University of Rochester

Miss Marie Bresson
Instructor
S.U. College at Brockport

Mr. Andrew J. Brown
Asst. Prof-Health Sciences
SUNY College Brockport

Mrs. Anne Brown
Inservice Coordinator
St. Joseph's Hospital

Miss Janet E. Burke
Public Health Educator
Livingston-Wyoming Co.Hlth Dept.

Mr. William A. Burns
Ass't. Prof-Biology Dept.
Rochester Institute of Tech.

Miss Helen M. Campbell
Asst. Dir., Office of Nsg.
N.Y.S. Dept of Health

Mrs. Jane Cannan
Assoc. Dir. - Nsg. Serv.
The Genesee Hospital

Miss Evajane Canon
Asst. Supvr. PH Nurse
Monroe Co. Health Dept.

Miss Catherine Cantwell
Staff Nurse - Public Hlth.
Monroe Co. Dept. of Health

Mr. Clifford L.M. Carpenter
Executive Director
Comprehensive Hlth. Plng.

Miss Patricia Carr
H.I.P.
Rochester Inst. of Tech.

Mrs. Grace B. Chilman
Asst. Dir. Public Hlth Nsg.
Monroe County Health Dept.

Miss Rita Chisholm
Assoc. Prof. of Nrsg.
University of Rochester

Mr. John H. Clancy,
President
Blue Shield of Central N.Y., Inc.

Miss Marion Clark
Supervising Nurse
St. John's Home

Mrs. Nancy Clark
Spec. Cardiovas. Nsg.
Roch. Reg. Medical Program

Sister Mary Claude
Director of Nsg. Serv.
St. James Mercy Hospital

Mr. Frederick G. Coisman
Clinical Psychologist
Monroe Developmental Center

Sister Mary Colette
Education Director
St. James Mercy Hosp.

Miss Margaret D. Connelly
District Super. Nurse
N.Y.S. Dept. of Health

Miss Margaret Connelly
Supervisory Nurse
Allegany Co. Pub.Health

Mr. George F. Connors
Asst. Administrator
St. Joseph's Hospital

Miss Margaret M. Cooney
Asst. Director
The Genesee Hospital

Mrs. Theresa Cooper
Instructor-in-charge
Roch. School of Prac. Nsg.

E. W. Corradini, M.D.
Chr. Utilization Review
Arnot Ogden Mem. Hosp.

Mr. B. A. Cronk
PHW Clinician-Home Care
Monroe Co. Health Dept.

Miss Helen T. Culian
Medical Record Consultant
Roch. Reg. Hosp. Council

Mrs. Eleanor Davis
Instructor-Med-Surg Nsg.
The Genesee Hospital

Miss Mary A. DeMetsenaere
Personnel Representative
University of Rochester

Jean Deming
Asst. Professor
Keuka College

Mr. Harry J. Dexter
Regional Representative
Medical Society Sch of N.Y.

Dr. John P. Dietrich
Head Biology Dept.
Roch. Inst. of Tech.

Mr. Alden T. Doolittle
Group Practice Coordinator
Blue Cross-Blue Shield

Gerald J. Duffner, M.D.
General Director
Clifton Spa. Hosp & Clinic

Miss Linda Dugan
Nursing Supervisor
Highland Hospital

Miss Betty Dwyer
Director NSIC #3
Action for a Better Comm.

Mr. Richard Eaton
Claims Manager
Roch. Hospital Service

Miss Marilyn Elman
Assistant Director
Highland Hospital Nsg. Sch.

Marion Emerson, M.D.
Associate- Prev. Medicine
University of Rochester

Miss Nan Eno
Director of Nursing
Seneca Falls Hospital

Miss Joan Eve
Instructor
Rochester Urban Center

Miss Muriel T. Ferraro
Supervisor
Community Dental Health

Dr. Arthur F. Fisher
Asst. Administrator
Myers Community Hosp.

Mrs. F. Joseph Flatley
Health Careers Co-Chrm.
Monroe Co. Medical Aux.

Mrs. Diane Fragaszy
Head Nurse-Out Pat. Serv.
The Genesee Hospital

Mr. Ronald C. Francione
Personnel Asst.
St. Ann's Home

Miss Hilda M. Frediani
Graduate Student
University of Rochester

Mrs. Katherine I. Frey
Director of Nurses
Medina Memorial Hosp.

Miss Jean Garling
Graduate Student
University of Rochester

Miss Jane F. Garry, Dir.
Special Hlth Manpower Prog
NYS Dept of Health

Miss Dorothy F. George
Asst. Dir. of Nsg.
Roch. General Hosp.

Miss K. L. Gilda
Chr. Dept of Dental Hyg.
Monroe Community College

Miss Mary M. Giles
Dir. of Nsg. Service
Jones Memorial Hosp.

Miss Patricia Gill
Acting Administrator
Third Ward Nghbd. Health Ctr.

Mr. Robert K. Goldstein
Administrator
Hill Haven Nursing Home

Mrs. Sue Greer
Lecturer in Nursing
Roberts Wesleyan College

Miss Ruth K. Grow
Director Nursing Serv.
Highland Hospital

Mrs. Joyce Hackimer
Head Nurse - Med/Surg.
The Genesee Hospital

Miss Jeanne C. Hadfield
Director Sch of Nursing
Highland Hospital

Loretta Haefele
Director Sch of Nursing
St. James Mercy Hosp.

Mrs. Gail Hagenah
Instructor, Ped Nsg.
The Genesee Hospital

Eleanor A. Hall
Chairman Dept of Nsg
University of Rochester

Raymond F. Hall
Director of Personnel
The Genesee Hospital

Ginny Hansen
Roch Reg Medical Prog
University of Rochester

Harry A. Hanson, M.D.
Medical Director
Eastman Kodak Company

Cynthia Hart
President
Gen Reg Cit Leag for Nsg.

Mrs. Elizabeth Hartsig
Asst. Prin. Sch of Nsg
The Genesee Hospital

Matie B. Haskell
Supervising P.H.N.
Monroe County Dept of Health

Mildred Hauge
Graduate Student
University of Rochester

Mrs. Ruby Hendryx
Assoc. Chr. Div. of Nsg
Roberts Wesleyan College

Jens Henriksen
Dir. Comm Hosp Relations
St. Mary's Hospital

Carol Hess
Coordinator of Nsg Prog
Rochester Urban Center

Glenwood E. Hieber
Emerg. Med. Care Rep
N.Y.S. Dept of Health

E. Harold Hinman, M.D.
Commissioner of Health
Livingston Co. Health Dept.

Camelia Ho
Dept of Nursing
University of Rochester

H. Reid Hoadley
Coordinator Cost Control
Rochester General Hosp.

Elaine G. Holcomb
Head Nurse
Roch. School for the Deaf

J. W. Holler
Director Clinical Serv
Highland Hospital

Mrs. Betty Holmes
Lecturer in Nursing
Roberts Wesleyan College

Evelyn Ann Hoyt
Asst. Sup. P.H.N.
Monroe Co. Dept of Health

Evelyn M. Hulse
Nursing Consultant
Roch Reg Hosp Council

Barbara M. Humphrey, R.N.
Proj Nurse - Div of Oncology
University of Rochester

David P. Hunter
Asst. Administrator
Highland Hospital

Phyllis Hutton
Instructor in Nursing
Keuka College

Donald M. Irish
Executive Director
Monroe County Medical Soc.

Miss Nanene Ishler
Inst. Sch of Nursing
Highland Hospital

Mrs. Joseph Izzo
President
Monroe Co Medical Aux.

Emma Rae Jones
Ontario Co. GRHPC Rep
Canandaigua, New York

Genevieve S. Jones
DHEW-PHS-NIH-Bureau of Health
Manpower Education

Dr. David L. Jordon
Optometrist
Rochester Optometric Society

William F. Joslyn
Chairman
Yates Co. C.H.P. Comm.

Edmond J. Kaiser
Nursing Serv. Consultant
N.Y.S. Dept. of Health

Jane Kallaus
Health Program
Project REACH

Rita Karski
Asst. Dir. Nurs. Serv.
Arnot Ogden Mem Hosp.

Mrs. Anna Marie Keller
Instructur
St. Mary's Hospital

Carol M. Kerrigan
City-Wide Nurs. Supervisor
Roch City School District

Sheila H. King
Training Coordinator
Roch. Nghbr. Health Cntr.

Max E. Knickerbocker
Associate Director
The Genesee Hospital

Mrs. Emily R. Knope
Nursing Instruction
Rochester City Sch Dist

Elizabeth Koehler
Supervisor - Public Health
Monroe Co Dept of Health

Mary L. Kohler
Graduate Student
University of Rochester

Herbert M. Krauss
Director
The Genesee Hospital

Miss Virginia M. Krenzer
Director Sch of Nsg
St. Mary's Hospital

Evelyn Lander
Instructor
St. James Mercy Hosp.

James Lewis
Health Committee Member
South East Area Coalition

Mrs. Phyllis Lilly
Instructor - Obs. Nsg
The Genesee Hospital

Miss Eleanor Lofthouse, R.N.
Sr. Nrsg Serv. Consultant
N.Y.S. Dept of Health

James M. Long
Roch Reg Medical Prog
University of Rochester

Mrs. Ardell Loomer
Asst. Prof of Nsg
Roberts Wesleyan College

Robert L. Love
Chr. Div. of Health Tech
SUNY Alfred

Mrs. Mary R. Mabie
Coord-Med.-Surg.Nsg
St. Mary's Hospital

Miss Ruth Mace
Coordinator of Stud.Serv.
St. Joseph's Hospital

Miss Kathleen D. Mack
Graduate Student
SUNY at Brockport

Mrs. Martha Mack
Inservice Instructor
St. Joseph's Hospital

Mary Rose Maley
President
Genesee Valley Leag for Nsg

Ellen Marple
Nurse Aide Inst.
WE-Mo-Co- Occup. Sch

Angie Mastromatteo
PHN Clinician
Monroe Co Health Dept

Arnold Matlin, M.D.
Pediatrician
No. Liv. Health Center

Elizabeth Mayle
Pathology Dept
University of Rochester

Rita McCarthy
Director Employee Dev.
Highland Hospital

Alice McCormick
Planning Associate
Gen Reg Health Plng Council

Nancy McCubbins

Patricia McDonald
Asst. Prof Nursing
Keuka College

Mrs. Yvonne McGhee, R.N.
Director of Inservice
Newark Wayne Community Hospital

Sister M. Remigia McHenry
Director Sch of Nsg
St. Joseph's Hospital

Adeania Merritt, R.N.

Strong Memorial Hosp.

Donald J. Merwin
Chief Health Planner
N.Y.S. Hlth Plg Comm

Evelyn J. Mickles
Administrator Asst.
Monroe County Medical Soc

Miss Mary L. Miller
Coord-Mat & Child Health
St. Mary's Hospital

G.F. Milinari, M.D.
Roch Reg Med Program
University of Rochester

Ruth G. Monroy
Asst Prof - Comm. Health
Keuka College

Miss Jeanette Moore
Principal Sch of Nsg
The Genesee Hospital

Helen T. Morehouse
Med Stud. Family Medicine
Highland Hospital

Miss Helena Mullen
Nursing Consultant
HEW/HSMHA/US Pub Hlth Serv

Edna Muntz
Registrar Dept of Nsg
University of Rochester

Mrs. Diane Murtaugh
Evening Supervisor
The Genesee Hospital

Ruth M. Negus
Asst Dir for Nsg Serv
Vst. Nurse Serv of Roch

Katherine Neill
Director of Nursing
Monroe Co Health Dept.

Miss Judith Nilsson
Head Nurse - Pediatrics
The Genesee Hospital

Peter M. Norman
Executive Director
No. Liv. Health Center

Ouida Norris
Chr. Biomed. Eng. Tech Dept.
Monroe Community College

Dorsey Nunley
Personnel
ABC Inc. Rochester

Judy Nyman
VISTA Worker
SE Area Coalition

Nadeem Obeid
Planning Associate
GRHPC

Frank O'Brien
Personnel Director
St. Mary's Hospital

Lawrence P. O'Neil
Educational Consultant
Monroe Developmental Center

Dr. Ruth-Ellen Ostler
Chief, Bur of Hlth Occup.Educ.
N.Y.S. Educ Dept. Albany, N.Y.

Mrs. Ralph Parker, Jr.
Participant
73 So. Main St., Pittsford,N.Y.

Vincent Parks
Business Manager
St. John's Home

Arthur Pawlowski
Research Analyst
N.Y.S. Dept of Hlth, Albany

Nancy D. Peck
Staff Associate
Nghbord Health Centers, Inc.

Josephine Pedulla
Dir. Public Hlth Nsg.
N.Y. State Dept of Hlth, Hornell

Camille Pere

Clarence Perkins
Public Affairs Officer
ABC, Inc.

Diane Petrovich, R.N.
Physicians's Assistant
Highland Hospital

Virginia Pierce
Private Duty Nurse

Mrs. Janice Powell, R.N.
Asst. Dir. Inservice Educ.
St. James Mercy Hospital

Ms. Maryann Powers
Research Associate
Ntl. Comm for Study NSG & Nsg Ed

Mr. Ronald A. Press
Assistant Director
The Genesee Hospital

Linda Presutti
Instructor
St. James Mercy Hospital

Mr. Kenneth Proefrock
Executive Director
Health Assoc. of Roch & Mon Co

Mrs. Dena S. Puskin
Sr. Recruitment Rep.
N.Y.S. Health Dept.

Ms. Susan Reddick
Student
University of Rochester

Mr. John J. Reed
Assistant Administrator
St. Joseph's Hospital

Mrs. Lucretia Richter
Lecturer in Nursing
Roberts Wesleyan College

Ms. Nancy Risser
Student
University of Rochester

Ms. Mary Robb
Nsg Service Coordinator
Highland Hospital

Ms. Susan Roberts
Staff Nurse
Monroe Co. Dept of Health

Ms. Martha Robinson
Hematology Technician
The Genesee Hospital

Ms. Gloria B. Rogers
Chairman Health Careers
Monroe Co Medical Auxil

Miss Julia C. Rugaber
Asst Dir.
Highland Hosp. Sch of Nsg

Sister Marie Raymond Brown
Asst. Prof. Psy Nsg.
University of Rochester

Sr. M. Elizabeth Schantz
Instr. Nsg. Education
SUNY Brockport

Mrs. Arline Schlueter
Supervisor PHN
Monroe Co Health Dept

Ms. Leoba Schneider
Chairman of Tech. Science
Roch Inst. of Technology

Sr. Mary Scholastica
Dir. Inservice Educ.
St. James Mercy Hospital

Mr. William Schoaf, R.N.
Student
University of Rochester

Mrs. Kathy Schoomaker
Instructor
Comm.College-Finger Lakes

Ms. Sally T. Selner
Assistant Administrator
Highland Hospital

Ms. Anne Sheldon
Research Assistant
U of R Medical Center

Mrs. Adelaide C. Smith
Dir. Nursing Services
Red Cross-Roch. Chapt.

Ms. Barbara E. Smith
Coord. of Clinical Serv.
OUTREACH Program

Mr. Edwin Smith
Executive Director
St. John's Home

Ms. Maria E. Smith
Nurse Spec. Diabetes
Roch Reg Med Program

Mrs. Doris S. Spencer
Asst. Dir. Vst. Hlth Aide
Visiting Nurse Service

Mrs. John D. States
Participant

Ms. Margaret M. Stickel
Supervisor
Community Dental Health

Donald Stockdale, M.D.
N.Y.S. Health Dept.

Miss Judith Sullivan
Graduate Student
University of Rochester

Mrs. Mary Jane Szczechowiak
Supervisor
Medina Memorial Hospital

Ms. Jeanette Taney
Instructor
Strong Memorial Hospital

Mr. Moir P. Tanner
Comprehensive Hlth Plg Council
Buffalo, N.Y.

Ms. Suzanne Tateo
Graduate Student
Univ. of Rochester

Mr. Tom Taylor
Health Program
PROJECT REACH

Sr. Mary Thomas
Instructor
Highland Hosp Sch of Nsg

Mr. Vernon R. Titus
Dir. Div of Mgmt
Roch Inst of Tech

Mr. Edward L. Tobin
Chairman, Dept of X-Ray
Monroe Comm. College

Mrs. Anne Treat
Director
Genesee Valley Med Found.

Ms. Wilhelmina Troicke
Chairman Health Comm.
South East Area Coalition

Dr. William J. Trolley
7th Dist. Dental Soc.

Sr. Margaret Tuley
Admin. Asst.
St. Mary's Hospital

Mrs. Mary Turner
Dir. Nsg. Prog. Inst.
Rochester Urban Center

Ms. W. A. Wadsworth
Chairman
Liv. Co. Area Hlth Plg.Council

Ms. Diane Van Waes
Student
University of Rochester

Ms. Virginia Wandover
Asst Prof of Nsg
University of Rochester

Mrs. Kathryn B. Weber, R.N.
Nurse Supervisor
Manpower Skills Center

Miss Marion Weber
Public Health Nsg Supervisor
Monroe Co. Health Dept.

Ms. Mary Jule Welch
Teacher
City School District

Mrs. Joan Westfall
Personnel Mgr. Dir of Nsg
Seneca Falls Hospital

Mrs. Mary S. Wetzel
Sr. Emp Counselor
N.Y.S. Emp Service

Mr. DeForest T. Whipple
Administrator
Monroe Community Hospital

Mrs. Dorothy Whittingham
Chairman Div of Nsg
Roberts Wesleyan College

Miss Shirley Williams, R.N.
Director of Nurses
Newark Wayne Comm Hospital

Ms. Kathryn Wood
Instructor
SUNY at Brockport

Ms. Bonnie Yannie
Health Program
Project REACH

Mr. Frederick J. Zazycki
Ass't. Bus. Officer
Monroe State School

Mrs. Geraldine Zimmer
Instructor
Highland Hosp. Sch. of Nrsg.

James G. Zimmer, M.D.
Assoc. Prof., Dept. Prev. Med.
University of Rochester Med. Center